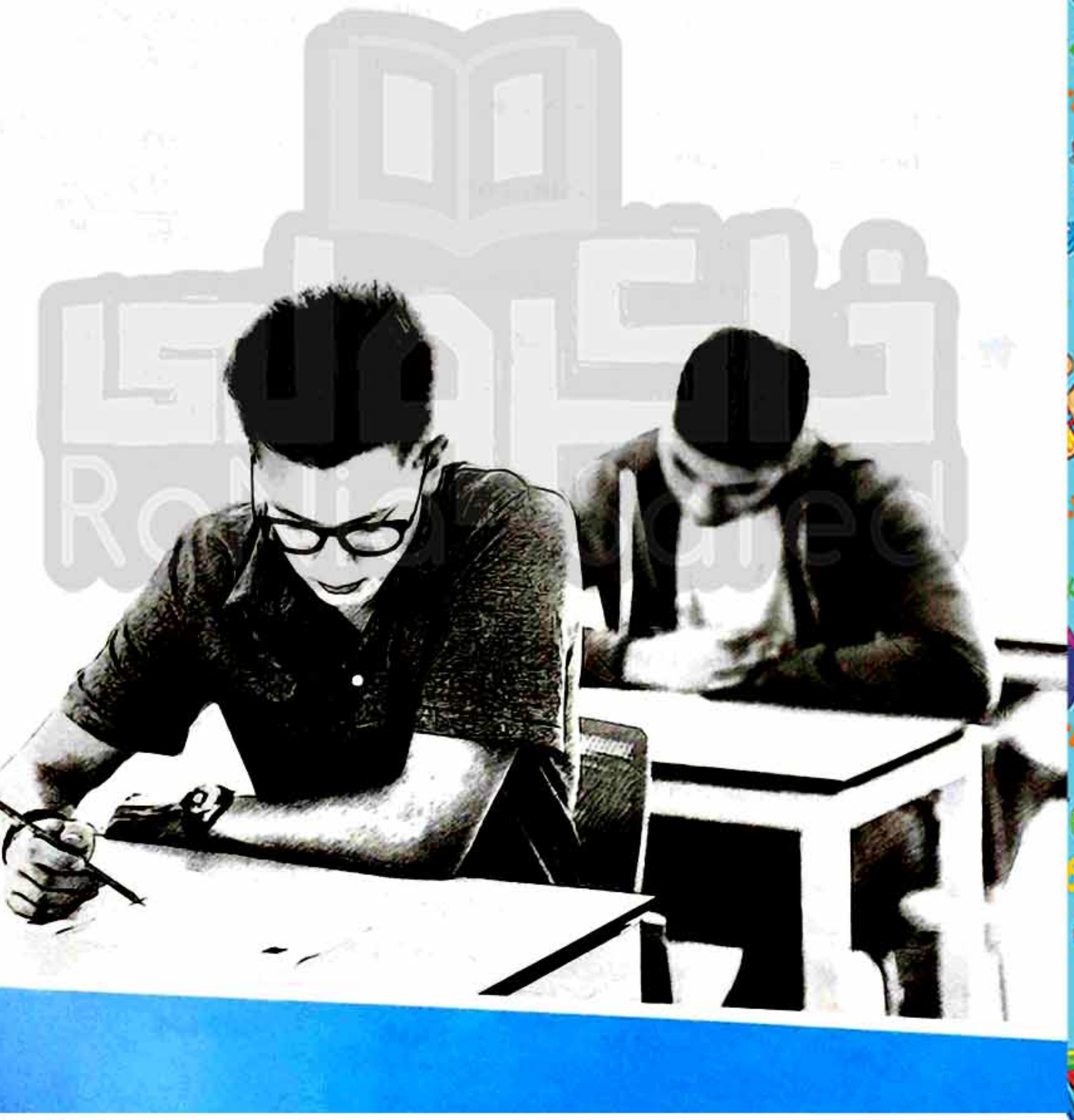
Final Examinations

on Geometry



Model Examinations of the School Book on Geometry

Model 1

Answer the following questions :

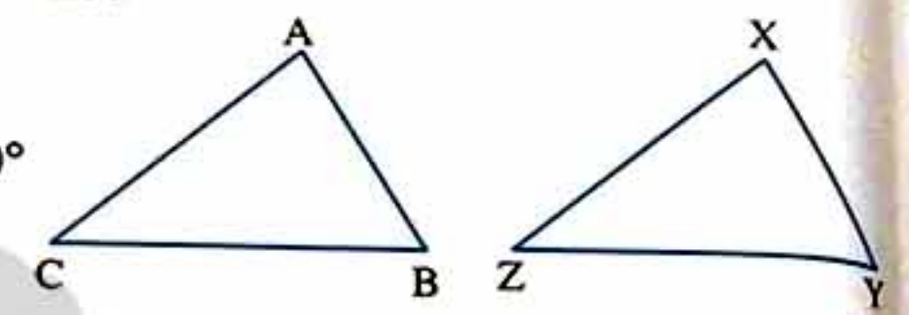
1 Complete each of the following :

1 The perpendicular bisector of a line segment is called .....

2 **In the opposite figure :**

If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) + m(\angle B) = 140°$

, then $m(\angle Z)$ = ...°

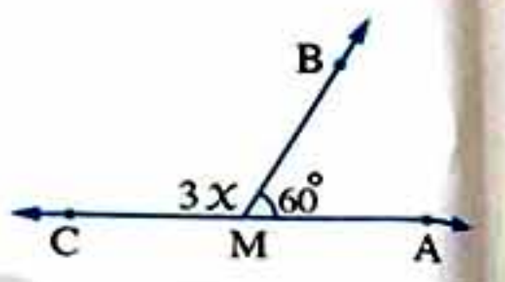


3 If $m(\angle B) = 105°$, then m (reflex $\angle B$) = ...°

4 **In the opposite figure :**

If $\overrightarrow{MB} \cap \overleftrightarrow{AC} = \{M\}$, $m(\angle AMB) = 60°$

, then the value of x equals .....°



5 Two right-angled triangles are congruent if .....

2 Choose the correct answer from those given :

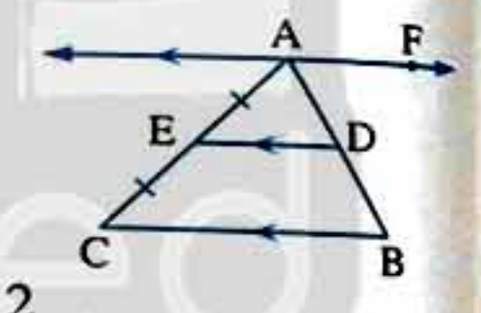
1 If $\angle X \equiv \angle Y$, $\angle X$ and $\angle Y$ are supplementary angles , then $m(\angle X)$ = ...

(a) 45° (b) 90° (c) 135° (d) 180°

2 **In the opposite figure :**

If $\overleftrightarrow{AF} // \overline{DE} // \overline{BC}$, AE = EC

, then AD : AB = ...



(a) 2 : 1 (b) 3 : 2 (c) 1 : 3 (d) 1 : 2

3 The two straight lines that are perpendicular to a third one are .....

(a) perpendicular. (b) intersecting.

(c) coincident. (d) parallel.

4 The measure of each of the two equal complementary angles equals .....

(a) 180° (b) 45° (c) 360° (d) 90°

5 If two straight lines intersect , then each two ..... angles have the same measure.

(a) vertically opposite (b) adjacent

(c) alternate (d) corresponding

6 If $\Delta ABC \equiv \Delta LMN$, then $m(\angle ACB) = m(\angle$ .....)

(a) LMN (b) MLN (c) LNM (d) NLM

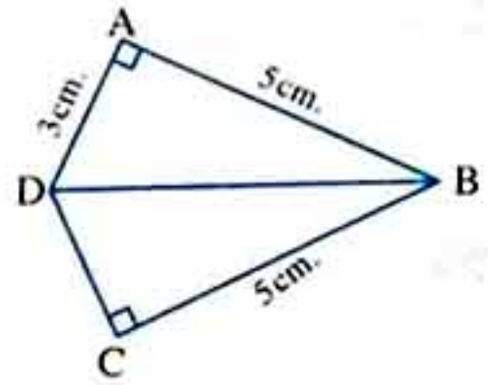
3 **[a] In the opposite figure :**

$m(\angle BAD) = m(\angle BCD) = 90°$

, $AB = CB = 5$ cm. , $AD = 3$ cm.

Mention the conditions for ΔABD , ΔCBD to be congruent

, then find : The length of $\overline{CD}$

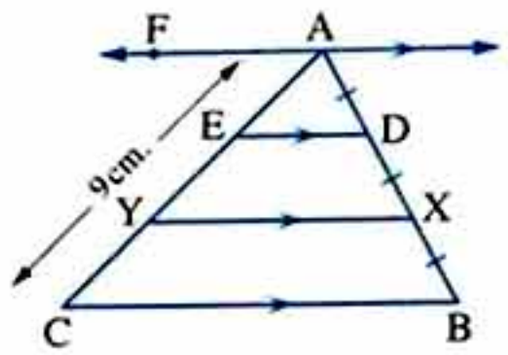


[b] In the opposite figure :

$\overleftrightarrow{AF} // \overline{DE} // \overline{XY} // \overline{BC}$

, $AD = DX = XB$, $AC = 9$ cm.

Find : The length of $\overline{AY}$ (Give the reason)



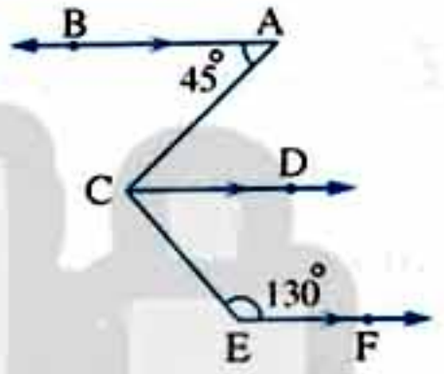
4 **[a] In the opposite figure :**

$\overrightarrow{AB} // \overrightarrow{CD} // \overrightarrow{EF}$

, $m(\angle A) = 45°$

, $m(\angle E) = 130°$

Find : $m(\angle ACE)$



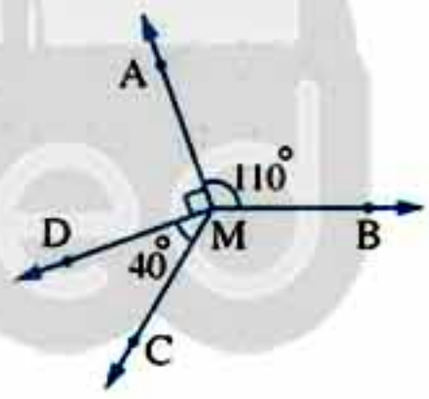
[b] In the opposite figure :

$m(\angle AMB) = 110°$

, $m(\angle AMD) = 90°$

, $m(\angle DMC) = 40°$

Find with steps : $m(\angle BMC)$

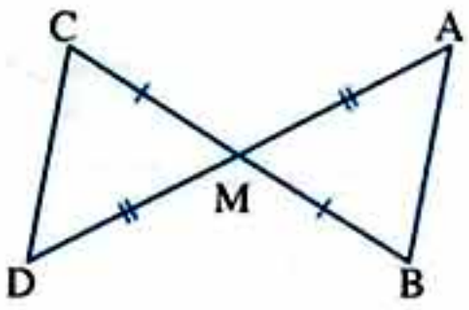


5 **[a] In the opposite figure :**

$\overline{AD} \cap \overline{BC} = \{M\}$

, $BM = MC$

, $AM = MD$



Write the conditions for ΔAMB , ΔDMC to be congruent.

[b] Using your geometric instruments , draw $\angle ABC$ of measure 110° , then draw $\overrightarrow{BF}$ to bisect the angle.

Model 2

Answer the following questions :

1 Complete each of the following :

1 The sum of the measures of the accumulative angles at a point equals .....°

2 If a straight line intersects two parallel straight lines , then each two corresponding angles are .....

3 If m (∠ A) = 110° , then m (reflex ∠ A) = ...°

4 Two right-angled triangles are congruent if .....

5 The two adjacent angles formed by the intersection of a straight line and a ray with a starting point on this straight line are .....

2 Choose the correct answer from those given :

1 If ∠ X complements ∠ Y and ∠ X ≡ ∠ Y , then m (∠ X) = ...

(a) 45° (b) 90° (c) 180° (d) 360°

2 The number of triangles in the figure  equals .....

(a) 4 (b) 6 (c) 7 (d) 8

3 If the ratio between the measures of two supplementary angles is 5 : 13 , then the measure of the smaller angle is .....

(a) 50° (b) 130° (c) 150° (d) 180°

4 If Δ ABC ≡ Δ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ...

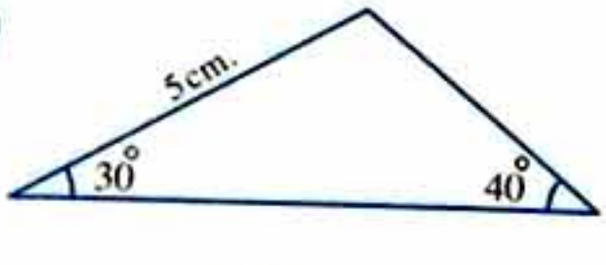
(a) 50° (b) 80° (c) 90° (d) 100°

5 The two straight lines that are perpendicular to a third one are .....

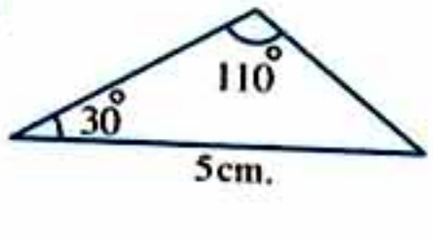
(a) perpendicular. (b) parallel. (c) coincident. (d) intersecting.

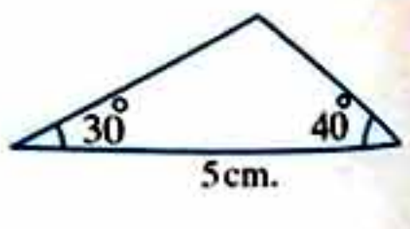
6 The figure ..... is not congruent to the opposite figure.

(a)

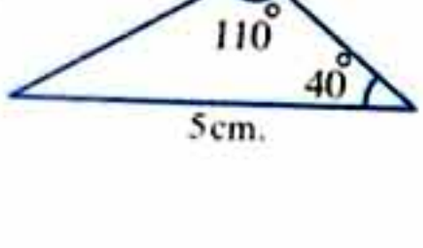


(b)

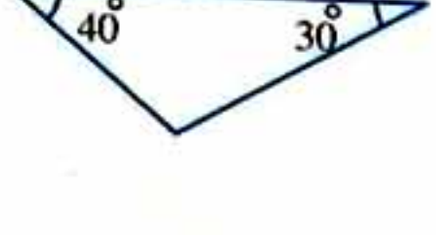




(c)



(d)



3 **[a]** Mention two cases of congruency of two triangles.

[b] In the opposite figure :

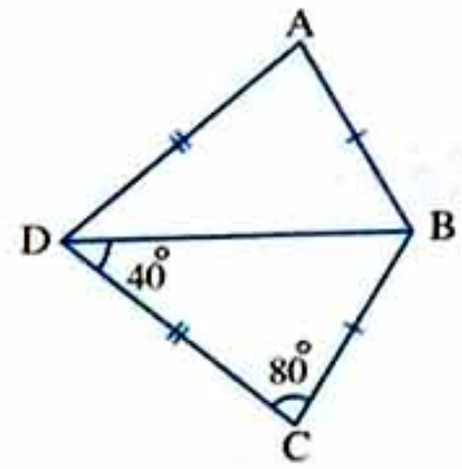
$AB = BC$, $AD = DC$

, $m(\angle C) = 80°$

, $m(\angle BDC) = 40°$

Prove that : $\Delta CBD \equiv \Delta ABD$

, then find : $m(\angle ABD)$



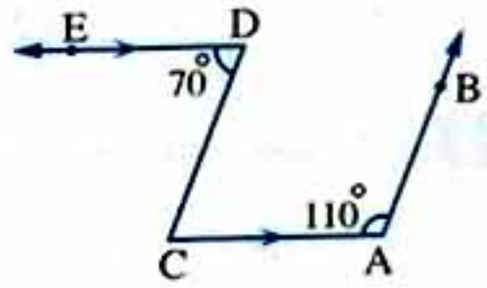
4 **[a] In the opposite figure :**

$\overrightarrow{DE} // \overline{AC}$, $m(\angle A) = 110°$

, $m(\angle D) = 70°$

Find : $m(\angle C)$

Is $\overrightarrow{AB} // \overline{CD}$? (Give the reason)



[b] Using the geometric instruments , draw $\angle ABC$ where $m(\angle B) = 80°$, then draw $\overrightarrow{BD}$ to bisect it. (Don't remove the arcs).

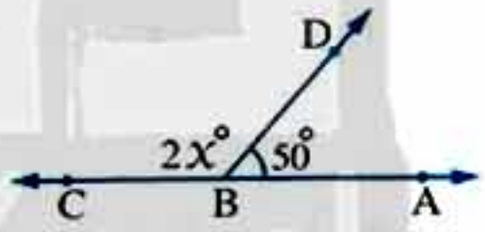
5 **[a] In the opposite figure :**

$\overleftrightarrow{AC} \cap \overleftrightarrow{BD} = \{B\}$

, $m(\angle ABD) = 50°$

, $m(\angle DBC) = 2x°$

Find in degrees the value of x



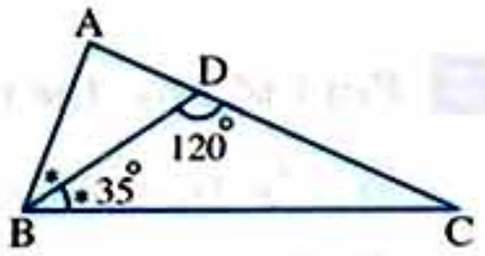
[b] In the opposite figure :

$\overrightarrow{BD}$ bisects $\angle ABC$

, $m(\angle DBC) = 35°$

, $m(\angle BDC) = 120°$

Find : $m(\angle A)$ in degrees.



Model examination for the merge students

Answer the following questions :

1 Complete each of the following :

1 If m (∠ A) = 100° , then m (reflex ∠ A) = ...°

2 The angle whose measure is 50° complements an angle of measure .....°

3 The two straight lines parallel to a third are .....

4 Two triangles are congruent if two sides and .....

5 If Δ ABC ≡ Δ XYZ , then m (∠ Z) = m (∠ .....)

2 Choose the correct answer from those given :

1 The sum of the measures of the accumulative angles at a point equals .....

(a) 630° (b) 180° (c) 90° (d) 360°

2 The axis of symmetry of a line segment is .....

(a) perpendicular to it from its midpoint. (b) parallel to it.

(c) equal to it in length. (d) congruent to it.

3 The supplement of the angle whose measure is 30° is an angle of measure .....

(a) 60° (b) 180° (c) 150° (d) 90°

4 The angle whose measure is more than 90° and less than 180° is ..... angle.

(a) an obtuse (b) an acute (c) a right (d) a straight

5 If Δ ABC ≡ Δ XYZ , then AB = ...

(a) XY (b) XZ (c) YZ (d) BC

3 Put (✔) for the correct statement and (✘) for the incorrect statement :

1 The right-angled triangle is congruent to the equilateral triangle. ( )

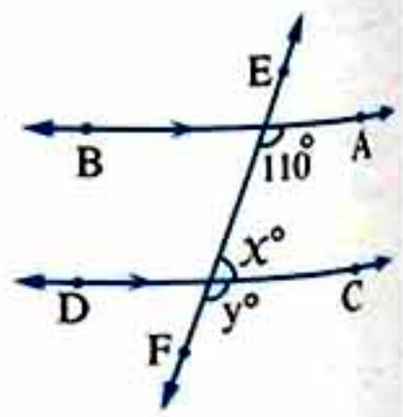
2 The two angles whose measures are 100° and 80° are supplementary. ( )

3 **From the opposite figure :**

(a) $\overleftrightarrow{AB} // \overleftrightarrow{EF}$ ( )

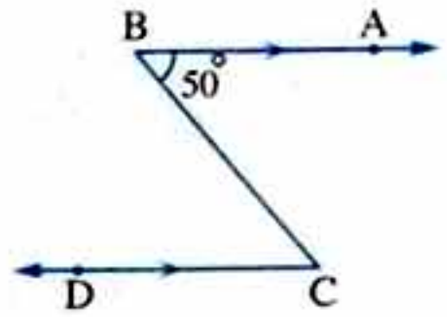
(b) $x = 70°$ ( )

(c) $y = 180°$ ( )



4 **[a] In the opposite figure :**

m (∠ ABC) = 50° , $\overrightarrow{BA}$ // $\overrightarrow{CD}$



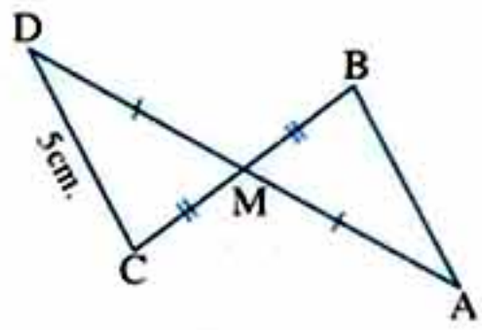
Complete to find : m (∠ BCD)

$\overrightarrow{BA}$ // .....

, then m (∠ ABC) = m (∠ .....) (..... angles)

, m (∠ BCD) = ...°

[b] From the opposite figure , complete :



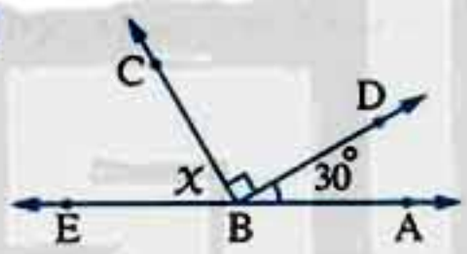
1 Δ ABM ≡ Δ .....

2 AB = ... cm.

3 m (∠ B) = m (∠ .....)

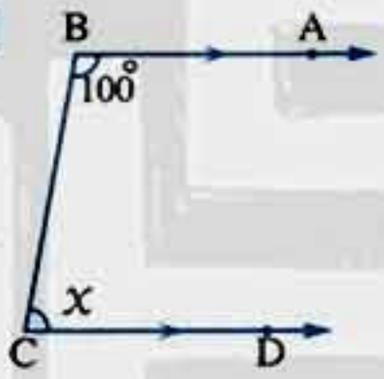
5 **[a] In each of the following figures , find the value of x :**

1



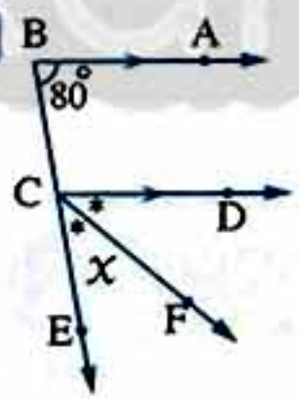
x = ...°

2



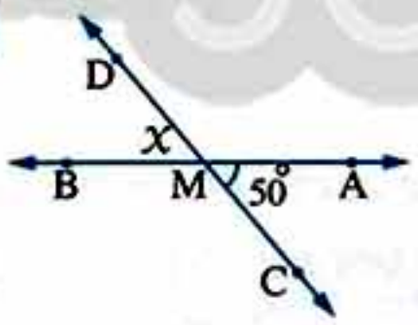
x = ...°

3



x = ...°

4



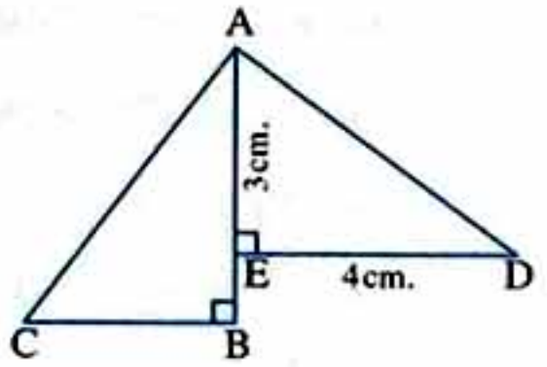
x = ...°

[b] In the opposite figure :

If Δ ABC ≡ Δ DEA ,

AE = 3 cm. and DE = 4 cm.

, **complete :** BE = ... cm.



Some Schools Examinations on Geometry

1 Cairo Governorate

Heliopolis Educational Directorate
St.Fatima Language School-Abbassia

Answer the following questions :

1 Complete :

1 The measure of each of two equal complementary angles equals .....°

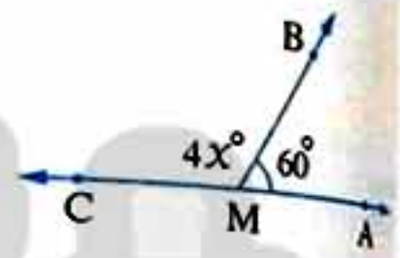
2 If m (∠ A) = 180° , then m (reflex ∠ A) = ...°

3 The straight line that is perpendicular to one of two parallel lines is also ..... to the other.

4 **In the opposite figure :**

If m (∠ AMB) = 60°

, then x = ...



5 If a straight line intersects two parallel straight lines , then each two corresponding angles are .....

2 Choose the correct answer :

1 If m (∠ X) = 3 m (∠ Y) and ∠ X , ∠ Y are supplementary angles , then m (∠ X) = ...

(a) 90° (b) 180° (c) 45° (d) 135°

2 If Δ ABC ≡ Δ XYZ and m (∠ X) + m (∠ Y) = 100° , then m (∠ C) = ...

(a) 50° (b) 100° (c) 90° (d) 80°

3 The supplement of the angle whose measure is 30° is an angle of measure .....

(a) 60° (b) 180° (c) 150° (d) 20°

4 The ratio between the measures of two complementary angles is 2 : 7 , then the measure of the smaller angle is .....

(a) 40° (b) 140° (c) 60° (d) 20°

5 If two straight lines intersect , then each two ..... angles have the same measure.

(a) vertically opposite (b) adjacent

(c) alternate (d) corresponding

6 If Δ ABC ≡ Δ XYZ , then BC = ...

(a) XY (b) YZ (c) XZ (d) AB

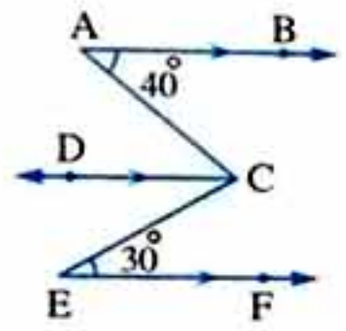
Final Examinations

3 **In the opposite figure :**

$\overrightarrow{AB} // \overrightarrow{CD} // \overrightarrow{EF}$

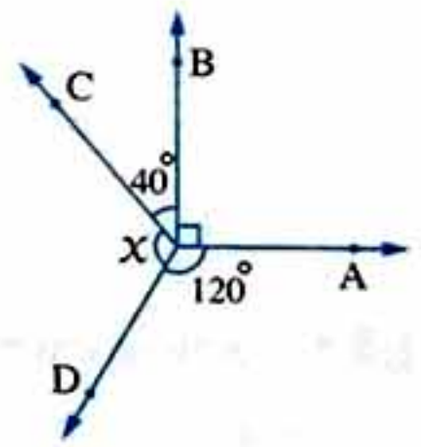
, m (∠ A) = 40° , m (∠ E) = 30°

Find : m (∠ ACE)



4 **[a] In the opposite figure :**

Find the value of x



[b] In the opposite figure :

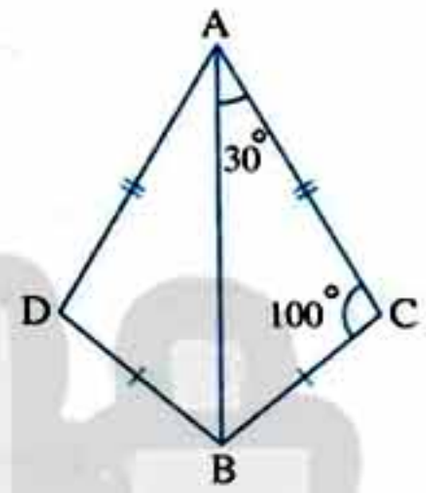
AC = AD , BC = BD

, m (∠ ACB) = 100°

, m (∠ CAB) = 30°

1 **Prove that :** Δ ABC ≡ Δ ABD

2 **Find :** m (∠ ABD)



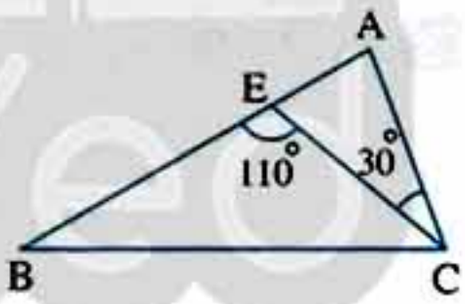
5 **[a]** Mention two cases of congruency of two triangles.

[b] In the opposite figure :

m (∠ ACE) = 30°

, m (∠ CEB) = 110°

Find : m (∠ A)



Answer the following questions :

1 **Choose the correct answer :**

1 If two straight lines intersect , then each two vertically opposite angles are .....

(a) equal in measure. (b) adjacent. (c) supplementary. (d) complementary.

2 If ∠ X ≡ ∠ Y and ∠ X , ∠ Y are complementary angles , then m (∠ X) = ...

(a) 45° (b) 90° (c) 135° (d) 180°

Geometry

3 The best unit to measure the area of a room is .....

(a) mm^2 (b) cm^2 (c) m^2 (d) km^2

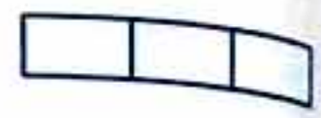
4 If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) = 45°$, $m(\angle C) = 75°$, then $m(\angle Y)$ = ...

(a) 60° (b) 65° (c) 55° (d) 100°

5 If L_1 , L_2 and L_3 are straight lines , $L_1 \perp L_3$, $L_2 \perp L_3$, then L_1 ..... L_2

(a) // (b) $\perp$ (c) coincides (d) intersects

6 The number of rectangles of the opposite figure is .....



(a) 3 (b) 4 (c) 6 (d) 5

2 Complete each of the following :

1 If $m(\angle A) = 100°$, then m (reflex $\angle A$) = ...°

2 Two triangles are congruent if each ..... of one triangle is equal to the corresponding part of the other triangle.

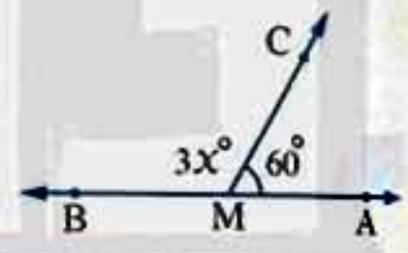
3 The perpendicular to a line segment from its midpoint is called .....

4 If the area of a rectangle is 20 cm^2 , its width is 4 cm. , then the perimeter of the rectangle is ..... cm.

5 **In the opposite figure :**

If $\overrightarrow{AB} \cap \overrightarrow{MC} = \{M\}$

, then x = ...°



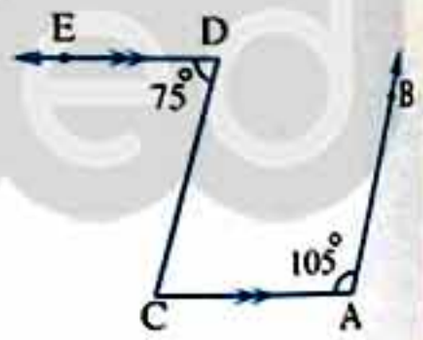
3 [a] In the opposite figure :

$\overrightarrow{DE} // \overrightarrow{AC}$, $m(\angle A) = 105°$

, $m(\angle D) = 75°$

Find : $m(\angle C)$

Is $\overrightarrow{AB} // \overrightarrow{CD}$? Giving the reason.



[b] By using your geometric instruments , draw $\overline{AB}$ of length 6 cm. , then draw the straight line L that is the axis of symmetry of $\overline{AB}$ where $\overline{AB} \cap L = \{C\}$

4 [a] In the opposite figure :

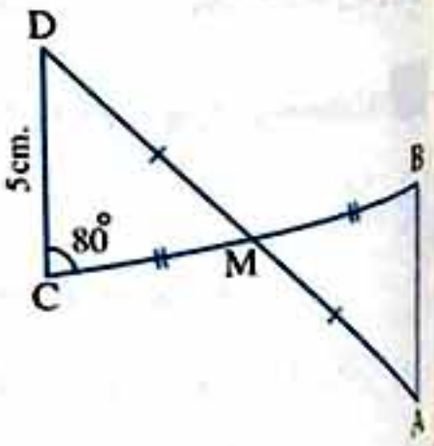
$m(\angle C) = 80°$, $\overline{CB} \cap \overline{AD} = \{M\}$

, $MB = MC$, $MD = MA$, $CD = 5$ cm.

Mention the conditions for

ΔABM , ΔDCM to be congruent

, **and find :** $m(\angle B)$

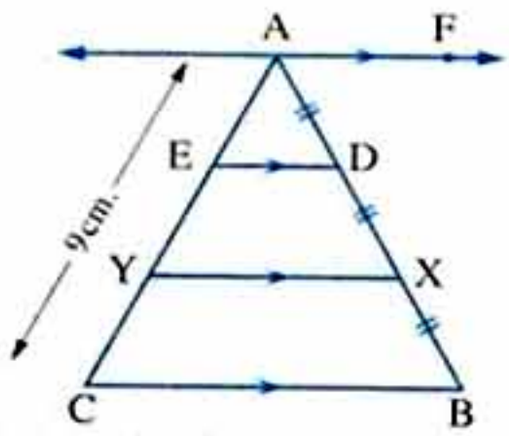


[b] In the opposite figure :

$\overleftrightarrow{AF} // \overline{DE} // \overline{XY} // \overline{BC}$

, $AD = DX = XB$, $AC = 9$ cm.

Find : The length of $\overline{AY}$



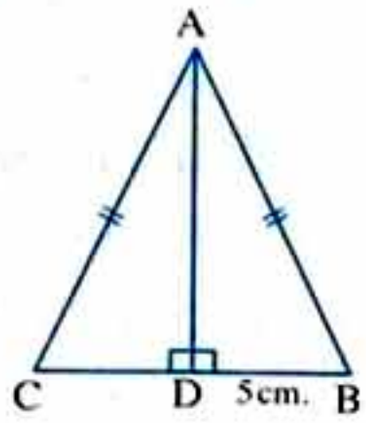
5 **[a] In the opposite figure :**

$AB = AC$, $m(\angle ADB) = m(\angle ADC) = 90°$, $BD = 5$ cm.

Mention the conditions for

ΔABD , ΔACD to be congruent

, and find : The length of $\overline{BC}$

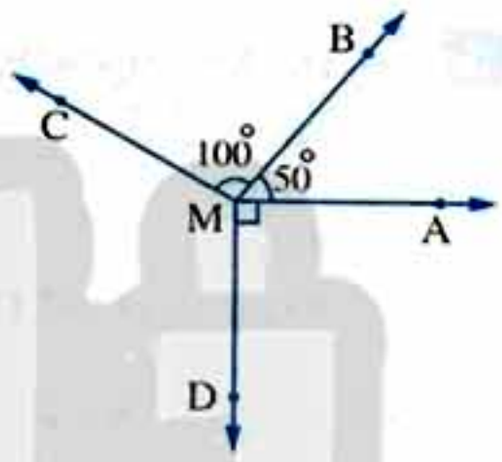


[b] In the opposite figure :

$m(\angle AMB) = 50°$, $m(\angle CMB) = 100°$

, $m(\angle DMA) = 90°$

Find : $m(\angle CMD)$



3 Cairo Governorate

Dar El-Salam and El-Basateen Education Zone

Answer the following questions :

1 **Complete :**

1 The two adjacent angles formed by the intersection of a straight line and a ray with a starting point on this straight line are .....

2 The sum of measures of the accumulative angles at a point equals .....°

3 If $m(\angle X) = 140°$, then the measure of the reflex angle of $\angle X$ = ...°

4 If two straight lines are perpendicular to a third , then the two straight lines are .....

5 If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) + m(\angle B) = 100°$, then $m(\angle Z)$ = ...°

2 **Choose the correct answer :**

1 If $\angle X \equiv \angle Y$ and $\angle X$, $\angle Y$ are complementary angles , then $m(\angle X)$ = ...°

(a) 45 (b) 90 (c) 180 (d) 30

Geometry

2 If the ratio between the measures of two supplementary angles is 5 : 13 , then the measure of the smaller angle is .....°

(a) 130 (b) 50 (c) 180 (d) 150

3 If a straight line cuts two parallel lines , then each two corresponding angles are .....

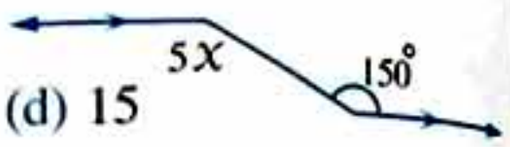
(a) equal in measure. (b) complementary.

(c) supplementary. (d) right.

4 If $\Delta XYZ \equiv \Delta ABC$, then .....

(a) BC = XZ (b) YX = CA (c) ZY = CB (d) AB = YZ

5 **In the opposite figure :** x = ...°



(a) 50 (b) 30 (c) 90 (d) 15

6 If $\overline{XY} \equiv \overline{AB}$, XY = 5 cm. , then XY + 3 AB = ... cm.

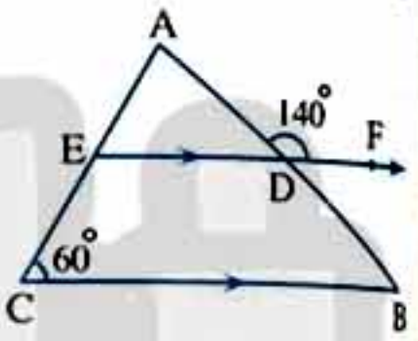
(a) 5 (b) 20 (c) 15 (d) 30

3 **[a] In the opposite figure :**

$\overline{BC} // \overrightarrow{EF}$, m (∠ C) = 60°

, m (∠ ADF) = 140°

Find each of the following : m (∠ B) and m (∠ A)



[b] Draw ∠ XYZ of measure 120° , then bisect it. (Don't remove the arcs)

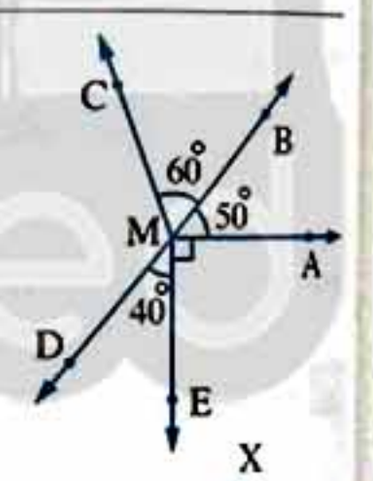
4 **[a] In the opposite figure :**

If m (∠ AMB) = 50° , m (∠ BMC) = 60°

, m (∠ DME) = 40°

and $\overrightarrow{MA} \perp \overrightarrow{ME}$

, find : m (∠ CMD)

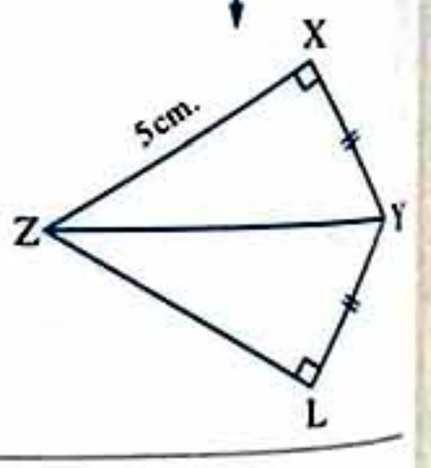


[b] In the opposite figure :

m (∠ X) = m (∠ L) = 90° , YX = YL

and ZX = 5 cm.

Prove that : $\Delta XYZ \equiv \Delta LYZ$ **, then find :** the length of $\overline{ZL}$



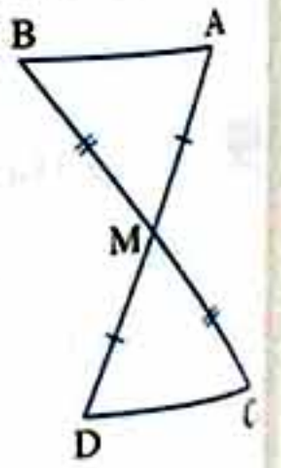
[c] Mention two cases of congruency of two triangles.

5 **[a] In the opposite figure :**

$\overline{AD} \cap \overline{BC} = \{M\}$

, BM = MC , AM = MD

Prove that : $\Delta AMB \equiv \Delta DMC$



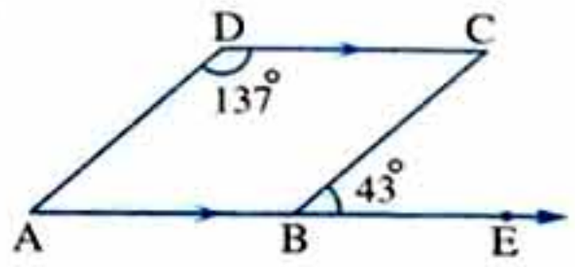
Final Examinations

[b] In the opposite figure :

$\overleftrightarrow{AB} \parallel \overline{DC}$, m (∠ EBC) = 43°

, m (∠ D) = 137°

Is $\overline{BC} \parallel \overline{AD}$? Giving reason.



4 Giza Governorate

El-Dokki Directorate
Math Inspection

Answer the following questions :

1 Choose the correct answer :

1 The angle whose measure is more than 180° and less than 360° is called .....

(a) obtuse. (b) straight. (c) reflex. (d) acute.

2 The supplementary angle of the angle of measure 53° is an angle of measure .....

(a) 53° (b) 37° (c) 127° (d) 180°

3 If Δ MLN ≡ Δ XYZ , then m (∠ N) = m (∠ .....)

(a) M (b) X (c) Z (d) Y

4 The sum of measures of the accumulative angles at a point equals .....

(a) 180° (b) 360° (c) 90° (d) 270°

5 The two angles of measures : 40° , 50° are .....

(a) complementary. (b) supplementary. (c) reflex. (d) obtuse.

6 In Δ XYZ , if m (∠ X) + m (∠ Z) = 95° , then m (∠ Y) = ...

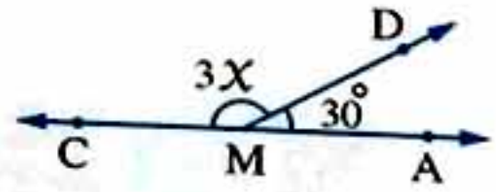
(a) 180° (b) 95° (c) 90° (d) 85°

2 Complete the following :

1 **In the opposite figure :**

$\overleftrightarrow{AC} \cap \overleftrightarrow{MD} = \{M\}$, m (∠ AMD) = 30°

, m (∠ CMD) = 3 $\mathcal{X}$, then the value of $\mathcal{X}$ equals .....°



2 Two triangles are congruent if two sides and ..... of one triangle are congruent to the corresponding parts of the other triangle.

3 If a straight line intersects two parallel straight lines , then each two corresponding angles are .....

4 If two adjacent angles are supplementary , then their two outer sides are .....

5 If m (∠ B) = 80° , then m (reflex ∠ B) = ...°

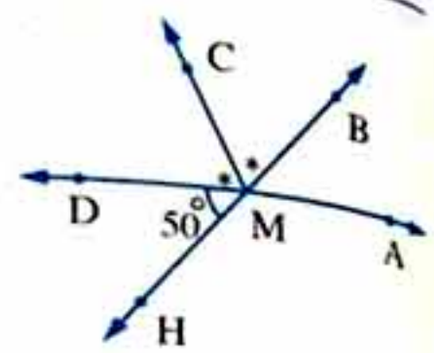
Geometry

3 **[a] In the opposite figure :**

$\overleftrightarrow{AD} \cap \overleftrightarrow{BH} = \{M\}$, m (∠ HMD) = 50°

, $\overrightarrow{MC}$ bisects ∠ BMD

Find : m (∠ AMC)

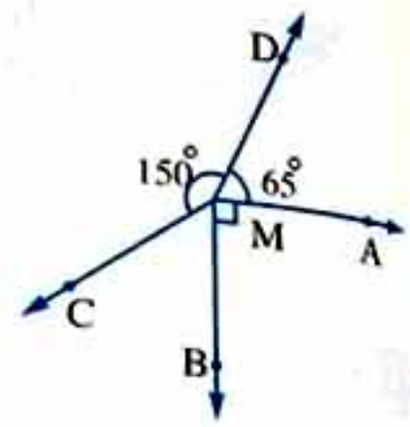


[b] In the opposite figure :

$\overrightarrow{MA} \perp \overrightarrow{MB}$, m (∠ AMD) = 65°

, m (∠ DMC) = 150°

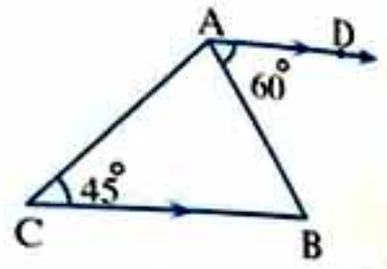
Find : m (∠ BMC)



4 **[a] In the opposite figure :**

$\overrightarrow{AD} // \overrightarrow{CB}$, m (∠ BAD) = 60° , m (∠ C) = 45°

Find : m (∠ BAC) , m (∠ B)

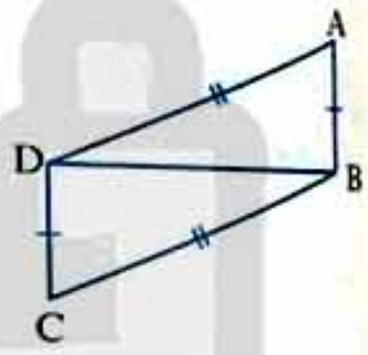


[b] In the opposite figure :

AD = BC , AB = CD

1 Is Δ ABD ≡ Δ CDB ? Why ?

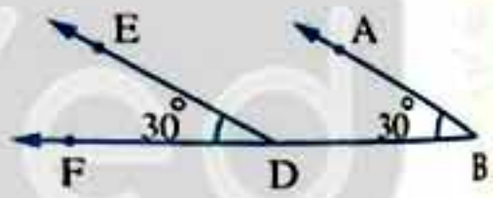
2 **Complete :** m (∠ A) = m (∠ .....)



5 **[a] In the opposite figure :**

m (∠ B) = 30° , m (∠ EDF) = 30°

Is $\overrightarrow{DE} // \overrightarrow{BA}$? Why ?



[b] Using the geometric instruments , draw ∠ ABC of measure 115° , then draw $\overrightarrow{BD}$ to bisect it.

(Don't remove the arcs)

5 Giza Governorate

Education Administration of 6 October

Answer the following questions :

1 **Choose the correct answer :**

1 When a transversal cuts two parallel lines , then every two ..... angles are equal in measure.

(a) alternate (b) supplementary (c) complementary (d) adjacent

2 The perpendicular bisector of a line segment is called .....

(a) symmetry axis. (b) parallel line. (c) intersecting line. (d) median.

3 If m (∠ A) = 90° , then m (reflex ∠ A) = ...

(a) 90° (b) 270° (c) 180° (d) 0°

4 The measure of the straight angle equals .....

(a) 0° (b) 90° (c) 180° (d) 270°

5 The angle whose measure is 179° , is ..... angle.

(a) an acute (b) a right (c) an obtuse (d) a straight

6 If ∠ X ≡ ∠ Y and ∠ X , ∠ Y are supplementary angles , then m (∠ X) = ...

(a) 45° (b) 90° (c) 135° (d) 180°

2 Complete :

1 The angle whose measure is 36° complements an angle of measure .....°
and supplements an angle of measure .....°

2 The two right-angled triangles are congruent if .....

3 If Δ ABC ≡ Δ XYZ , then m (∠ A) = m (∠ .....) , and XY = ...

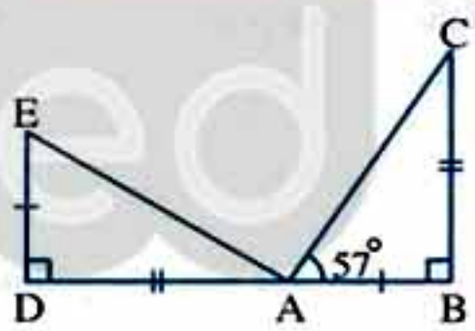
4 The sum of measures of the accumulative angles at a point equals .....°

5 The angle whose measure is greater than 180° and less than 360° is called .....

3 [a] In the opposite figure :

AB = DE , BC = AD , m (∠ CAB) = 57°

Find the measures of the unknown angles in the triangle ADE



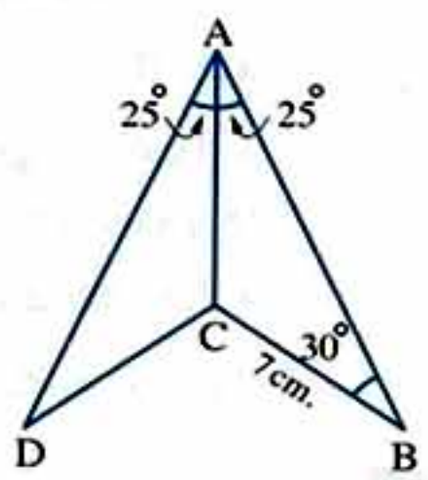
[b] In the opposite figure :

If Δ ACB ≡ Δ ACD , **complete :**

1 m (∠ D) = ...°

2 CD = ... cm.

3 m (∠ ACD) = ...°



4 [a] Draw the angle ABC where m (∠ ABC) = 70° , then using the ruler and the compasses , draw $\overrightarrow{BD}$ to bisect the angle. (Don't remove the arcs)

Geometry

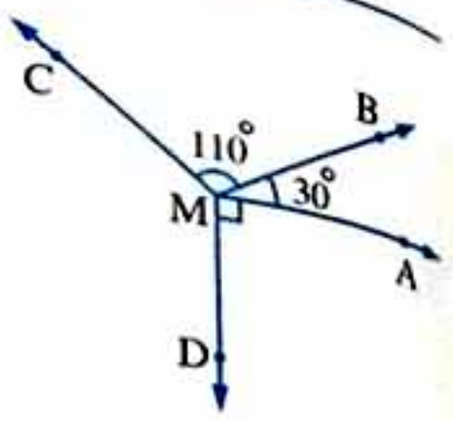
[b] In the opposite figure :

m (∠ AMB) = 30°

, m (∠ BMC) = 110°

and m (∠ AMD) = 90°

Find : m (∠ CMD)

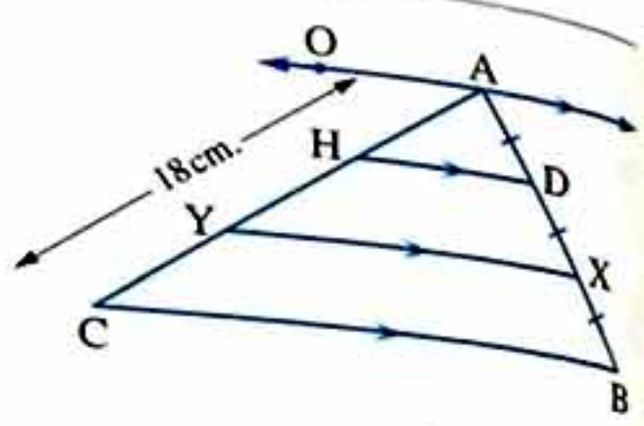


5 **[a] In the opposite figure :**

$\overleftarrow{AO} // \overline{HD} // \overline{YX} // \overline{CB}$

, AD = DX = XB and AC = 18 cm.

Find : The length of $\overline{AY}$

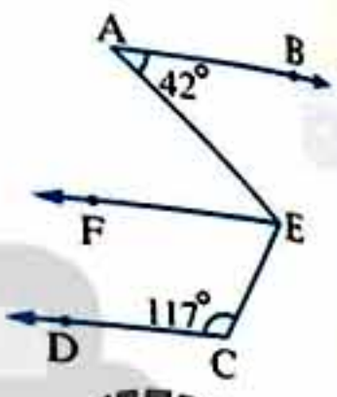


[b] In the opposite figure :

$\overrightarrow{AB} // \overrightarrow{CD}$, $\overrightarrow{EF} // \overrightarrow{CD}$

, m (∠ A) = 42° and m (∠ C) = 117°

Determine : m (∠ AEC)



6 Alexandria Governorate

El-Montaza Educational Zone
Maths Supervision

Answer the following questions :

1 **Complete :**

1 The angle of measure ..... complements an angle of measure 25°

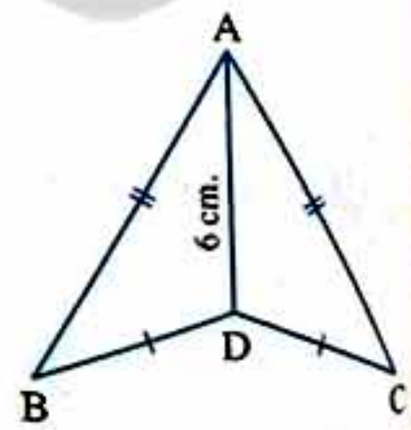
2 The sum of measures of the accumulative angles at a point is equal to .....°

3 **In the opposite figure :**

If the perimeter of the shape ABDC = 20 cm.

and the length of $\overline{AD}$ = 6 cm.

, then the perimeter of Δ ABD = ... cm.



4 If a straight line intersects two parallel straight lines

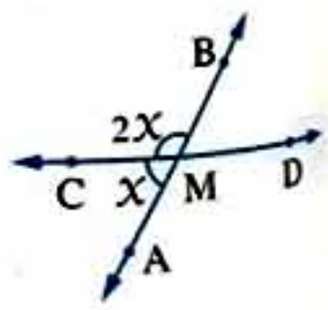
, then every two corresponding angles are ..... in measure.

5 An angle has a measure of 120° , then the measure of its reflex angle is .....°

2 **Choose the correct answer :**

1 **In the opposite figure :**

If $\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, then x = ...



(a) 30° (b) 45° (c) 60° (d) 90°

2 If m (∠ B) = 38° , then its supplementary angle is of measure .....

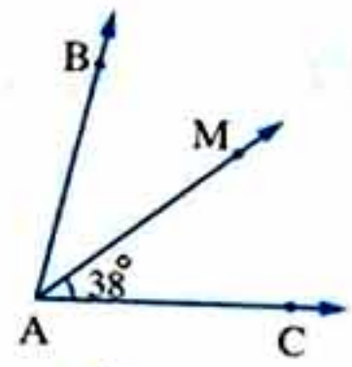
(a) 52° (b) 142° (c) 228° (d) 322°

3 **In the opposite figure :**

$\overrightarrow{AM}$ bisects ∠ BAC , then m (∠ BAC) = ...

(a) 38° (b) 76°

(c) 142° (d) can't be calculated.

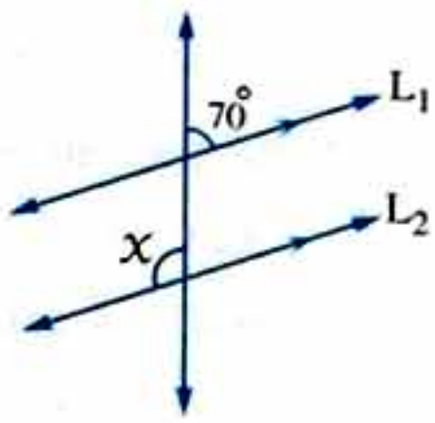


4 **In the opposite figure :**

x = ...

(a) 70° (b) 90°

(c) 110° (d) 290°



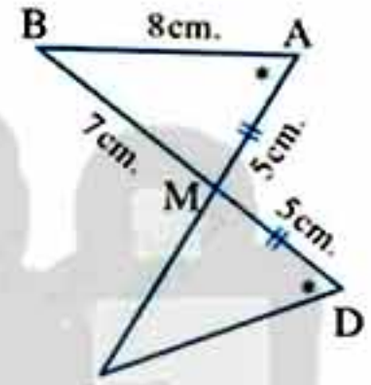
5 **In the opposite figure :**

$\overline{AC} \cap \overline{BD} = \{M\}$, AM = MD = 5 cm.

and m (∠ A) = m (∠ D) , then CD = ... cm.

(a) 5 (b) 7

(c) 8 (d) 12

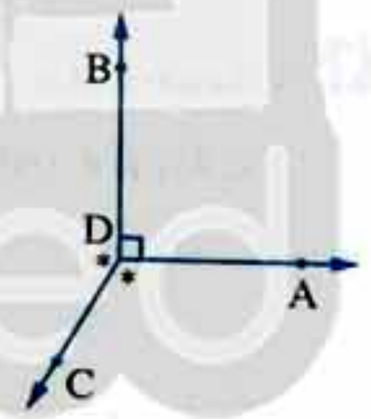


3 **[a] In the opposite figure :**

m (∠ ADB) = 90°

, $\overrightarrow{DC}$ bisects the reflex angle BDA

Calculate : m (∠ BDC)



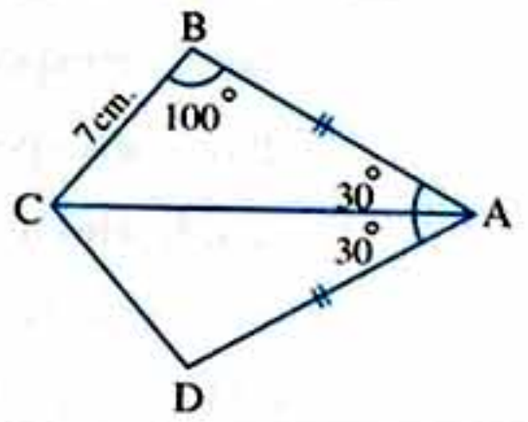
[b] In the opposite figure :

AB = AD , BC = 7 cm. , m (∠ B) = 100°

and m (∠ BAC) = m (∠ DAC) = 30°

1 Is Δ BAC ≡ Δ DAC ? Why ?

2 **Find :** m (∠ ACD) and the length of $\overline{CD}$



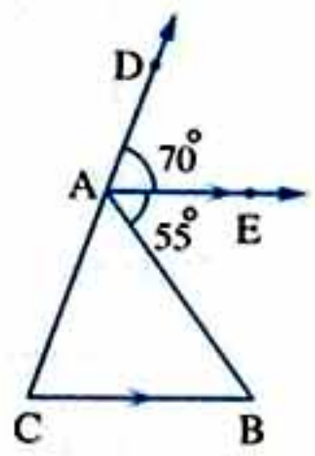
4 **[a] In the opposite figure :**

ABC is a triangle where the point A ∈ $\overrightarrow{CD}$

, $\overrightarrow{AE}$ // $\overline{CB}$, m (∠ DAE) = 70°

and m (∠ EAB) = 55°

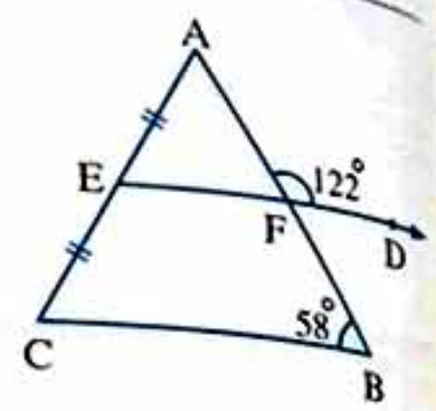
Calculate the measure of each angle in the triangle ABC



[b] Draw a line segment $\overline{AB}$ of length 8 cm. , then draw its line of symmetry.
(perpendicular bisector of it) (Don't remove the arcs)

5 **[a] In the opposite figure :**

ABC is a triangle , E is the midpoint of $\overline{AC}$, $\overrightarrow{EF}$ intersects $\overline{AB}$ at F , m (∠ AFD) = 122°
and m (∠ B) = 58°
Is $\overrightarrow{EF} \parallel \overline{CB}$? Why ?



[b] In the opposite figure :

ABC is an isosceles triangle
and $\overline{AD} \perp \overline{BC}$
Why does m (∠ C) = m (∠ B) ?

7 Alexandria Governorate

East Educational Zone
Inspectorate of Mathematics

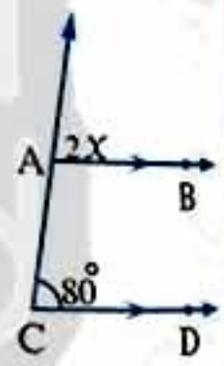
Answer the following questions :

1 **Choose the correct answer :**

1 **In the opposite figure :**

m (∠ C) = 80° , $\overrightarrow{AB} \parallel \overrightarrow{CD}$, then x = ...

(a) 80° (b) 50° (c) 40° (d) 100°



2 Two triangles are congruent if ..... are congruent.

(a) two corresponding sides

(b) two corresponding sides and the included angle

(c) a side and an angle with their corresponding

(d) their corresponding angles

3 If Δ ABC ≡ Δ XYZ , then BC = ...

(a) XY (b) AB (c) XZ (d) YZ

4 The acute angle supplements ..... angle.

(a) an acute (b) a right (c) an obtuse (d) a straight

5 If two straight lines intersects , then each two ..... angles have the same measure.

(a) vertically opposite

(b) adjacent

(c) alternate

(d) corresponding

6 The image of the point $(-3, 5)$ by translation $(0, -10)$ is .....

(a) $(3, -5)$ (b) $(-3, -5)$ (c) $(3, 5)$ (d) $(5, -3)$

2 Complete each of the following :

1 If a straight line intersects two parallel straight lines , then each two alternate angles are .....

2 If the ratio between the measures of two supplementary angles is 1 : 2 , then the measure of the smaller angle equals .....°

3 If $\angle A \equiv \angle B$, then $m(\angle A) - m(\angle B) =$ .....

4 The perpendicular bisector of a line segment is called .....

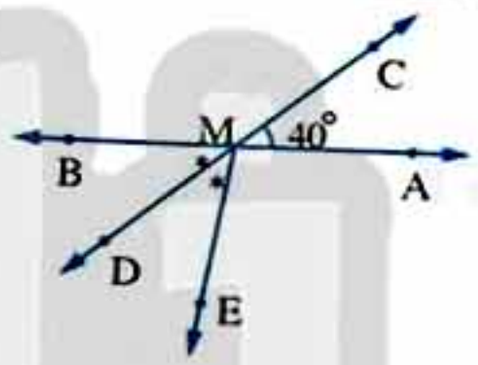
5 The square has ..... axes of symmetry.

3 [a] In the opposite figure :

$\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, $m(\angle AMC) = 40°$

and $\overrightarrow{MD}$ bisects $\angle BME$

Find : $m(\angle AME)$



[b] Using the ruler and the compasses , draw ΔABC in which $AB = AC = 6$ cm. , $BC = 5$ cm. Bisect $\angle B$, $\angle C$ by two bisectors which intersect at M

(Don't remove the arcs)

4 [a] In the opposite figure :

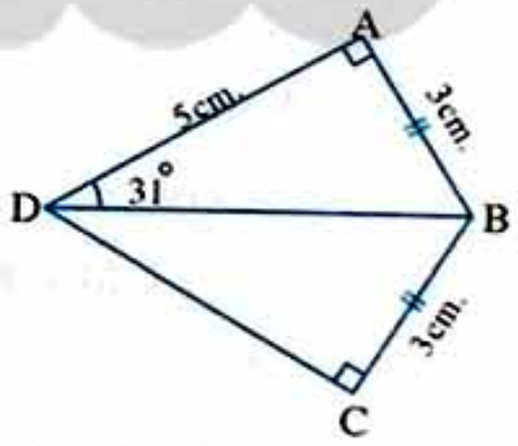
$m(\angle BAD) = m(\angle BCD) = 90°$

, $m(\angle ADB) = 31°$, $AB = CB = 3$ cm. , $AD = 5$ cm.

1 Is $\Delta ABD \equiv \Delta CBD$? Why ?

2 **Find :** The length of $\overline{CD}$

3 **Find :** $m(\angle ADC)$



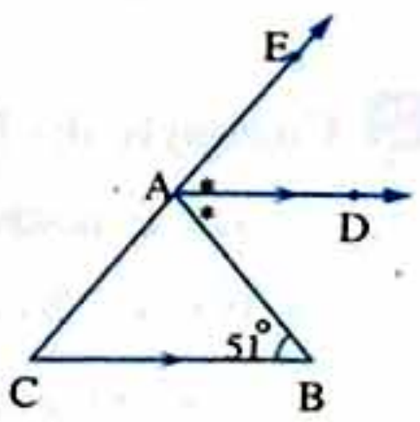
[b] **In the opposite figure :**

$\overrightarrow{AD} // \overline{BC}$

, $\overrightarrow{AD}$ bisects $\angle EAB$

, $m(\angle ABC) = 51°$

Find : $m(\angle BAD)$ and $m(\angle C)$



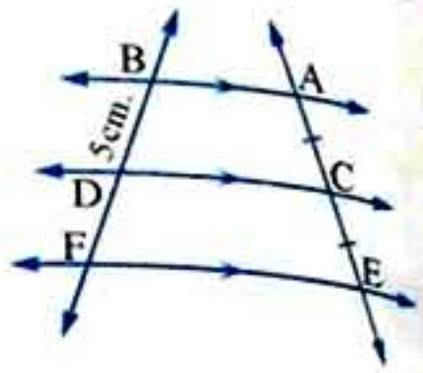
Geometry

5 **[a] In the opposite figure :**

$\overleftrightarrow{AB} // \overleftrightarrow{CD} // \overleftrightarrow{EF}$, AC = CE , DB = 5 cm.

Find : The length of $\overline{BF}$

, by giving the reason.



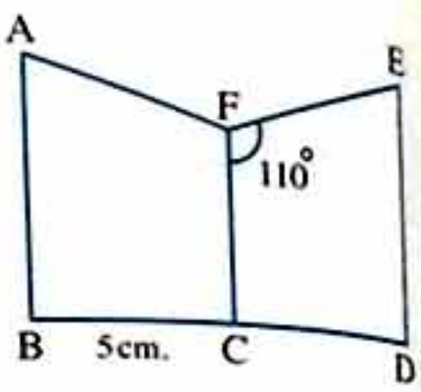
[b] In the opposite figure :

The polygon ABCF ≡ the polygon EDCF

, m (∠ EFC) = 110° , BC = 5 cm.

Find : 1 m (∠ AFC) , m (∠ AFE) , m (∠ FCB)

2 The length of $\overline{BD}$



8 El-Kalyoubia Governorate

Directorate of Education
Math Supervision

Answer the following questions :

1 **Choose the correct answer from those given :**

1 If two straight lines intersect , then each two ..... angles have the same measure.

(a) corresponding (b) alternate (c) adjacent (d) vertically opposite

2 If two straight lines are perpendicular to a third , then the two straight lines are .....

(a) intersecting. (b) perpendicular. (c) parallel. (d) coincident.

3 The rectangle has ..... lines of symmetry.

(a) zero (b) 2 (c) 3 (d) 4

4 If Δ ABC ≡ Δ LMN , then m (∠ BCA) = m (∠ .....)

(a) MNL (b) MLN (c) NML (d) NLM

5 If $\overline{AB} \equiv \overline{CD}$, then AB – CD = ...

(a) 1 (b) 2 (c) zero (d) 5

6 Any two line segments are congruent if they are equal in .....

(a) measure. (b) capacity. (c) weight. (d) length.

2 **Complete the following :**

1 The two straight lines parallel to a third are .....

2 If m (∠ B) = 110° , then m (reflex ∠ B) = ...°

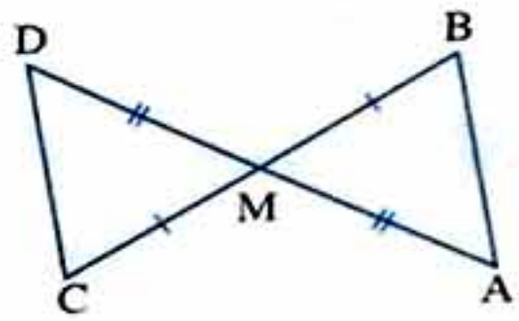
3 The two adjacent angles formed by intersecting of a straight line and a ray are .....

4 The two right-angled triangles are congruent if .....

5 A square of side length 7 cm. , then its area = ... cm^2.

3 [a] In the opposite figure :

$\overline{AD} \cap \overline{BC} = \{M\}$, MB = MC , MA = MD



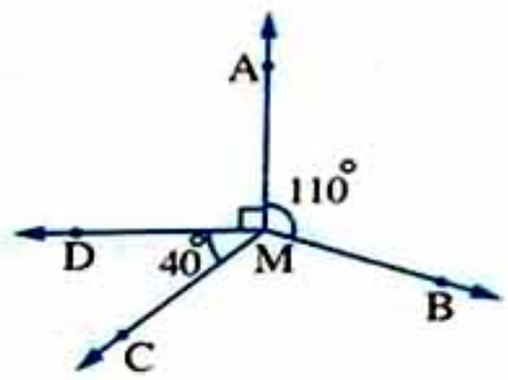
Write the conditions for Δ AMB and Δ DMC to be congruent :

1 ..... 2 ..... 3 .....

[b] Using the opposite figure , complete :

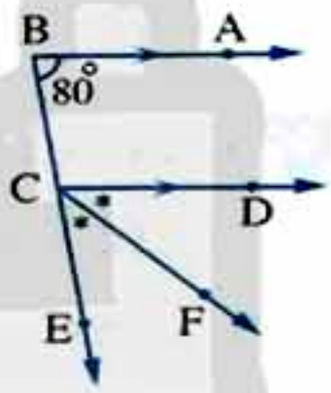
1 m (∠ AMB) + m (∠ BMC)
+ m (∠ CMD) + m (∠ DMA) = ...°

2 m (∠ BMC) = ... – .....
= .....°



4 [a] In the opposite figure :

$\overrightarrow{BA} // \overrightarrow{CD}$, m (∠ B) = 80° , $\overrightarrow{CF}$ bisects ∠ DCE



Complete :

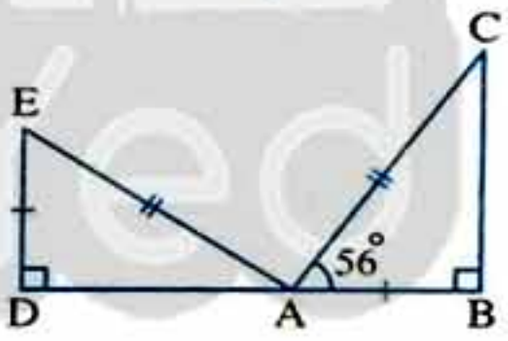
1 m (∠ DCE) = m (∠ .....) = ...°

2 m (∠ ECF) = ...°

[b] Using the opposite figure , complete :

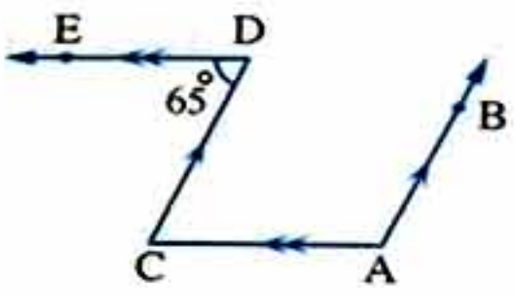
1 Δ ABC ≡ Δ EDA
because ..... , ... , ...

2 m (∠ EAD) = ...°



5 [a] In the opposite figure :

$\overrightarrow{DE} // \overline{AC}$, $\overrightarrow{AB} // \overline{CD}$, m (∠ D) = 65°



Complete :

1 m (∠ C) = m (∠ .....) = ...°

2 m (∠ A) = ...° because .....

[b] By using your geometric instruments , draw $\overline{AB}$, where AB = 8 cm. and draw the axis of symmetry of $\overline{AB}$ (Don't remove the arcs).

Geometry

9 El-Sharkia Governorate

Hehia Exp. Lang. School
Department : Math's

Answer the following questions :

1 Complete each of the following :

1 The angle whose measure is 30° complements an angle of measure ..... °

2 If Δ ABC ≡ Δ XYZ , m (∠ A) + m (∠ B) = 110° , then m (∠ Z) = ... °

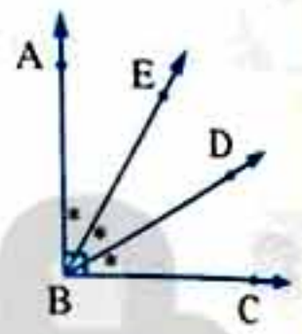
3 If m (∠ A) = 140° , then m (reflex ∠ A) = ... °

4 If a straight line cuts two parallel straight lines , then each two corresponding angles are .....

5 **In the opposite figure :**

If $\overrightarrow{BA} \perp \overrightarrow{BC}$

, then m (∠ CBD) = ... °



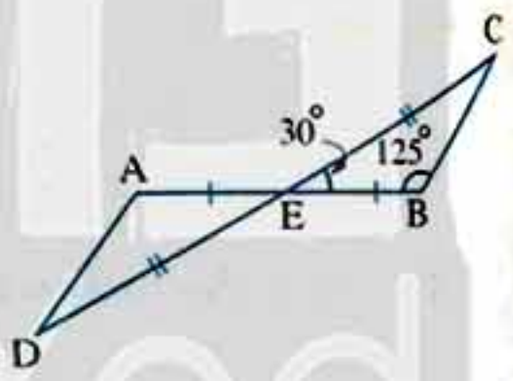
2 Choose the correct answer :

1 **In the opposite figure :**

m (∠ D) = ...

(a) 25° (b) 30°

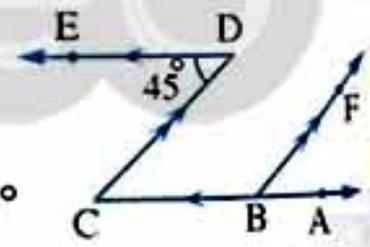
(c) 60° (d) 125°



2 **In the opposite figure :**

m (∠ ABF) = ...

(a) 45° (b) 90° (c) 135° (d) 40°



3 The angle of measure 98° its type is .....

(a) acute. (b) right. (c) obtuse. (d) straight.

4 The sum of measures of the accumulative angles at a point equals .....

(a) 90° (b) 180° (c) 630° (d) 360°

5 If m (∠ A) = 2 m (∠ B) , ∠ A supplements ∠ B , then m (∠ B) = ...

(a) 30° (b) 60° (c) 90° (d) 120°

6 The obtuse angle supplements ..... angle.

(a) an acute (b) an obtuse (c) a zero (d) a right

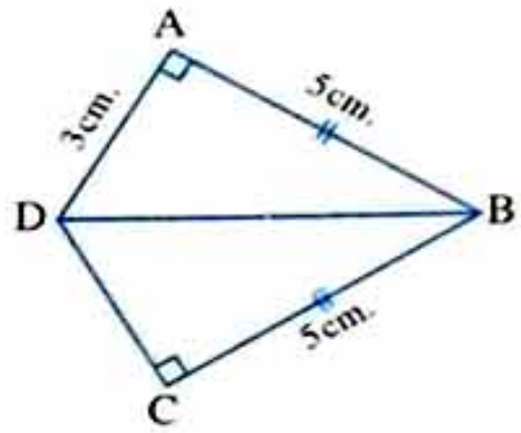
3 **[a] In the opposite figure :**

$m(\angle BAD) = m(\angle BCD) = 90°$

, $AB = CB = 5$ cm. , $AD = 3$ cm.

Mention the conditions for ΔABD , ΔCBD to be congruent

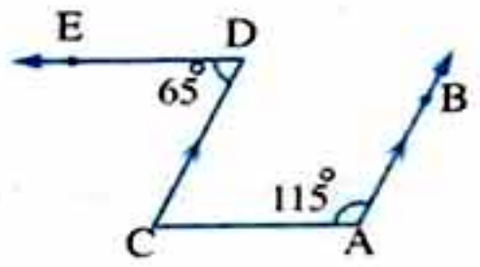
, then find : The length of $\overline{CD}$



[b] In the opposite figure :

If $\overrightarrow{AB} // \overrightarrow{CD}$, $m(\angle D) = 65°$, $m(\angle A) = 115°$

, then prove that : $\overrightarrow{AC} // \overrightarrow{DE}$



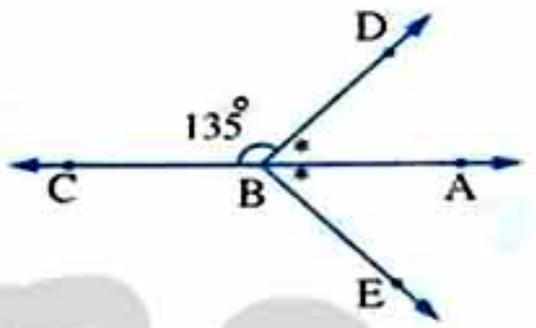
4 **[a] In the opposite figure :**

If $B \in \overrightarrow{AC}$, $m(\angle DBC) = 135°$

and $\overrightarrow{BA}$ bisects $\angle DBE$

, find :

1 $m(\angle ABD)$ 2 $m(\angle DBE)$ 3 $m(\angle CBE)$

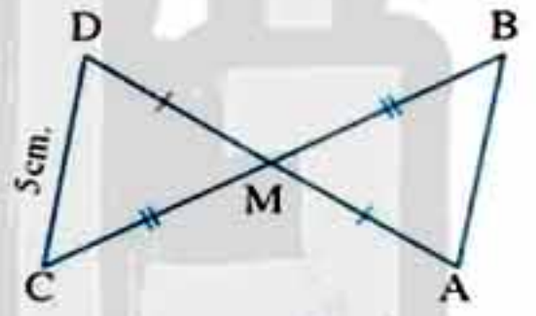


[b] From the opposite figure , complete :

1 $\Delta ABM \equiv \Delta$ .....

2 AB = ... cm.

3 $m(\angle B) = m(\angle$ .....)



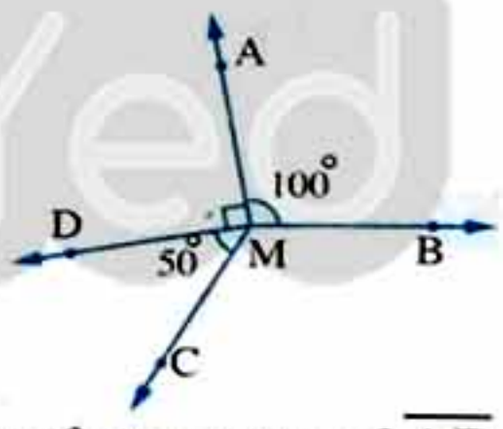
5 **[a] In the opposite figure :**

$m(\angle BMA) = 100°$

, $m(\angle AMD) = 90°$

, $m(\angle DMC) = 50°$

Find with steps : $m(\angle BMC)$



[b] Draw the line segment AB of length 8 cm. , then construct the axis of symmetry of $\overline{AB}$ (Don't remove the arcs)

Answer the following questions :

1 **Choose the correct answer :**

1 If $m(\angle A) = 130°$, then m (reflex $\angle A$) = ...

(a) 130° (b) 50° (c) 285° (d) 230°

Geometry

2 If the triangle ABC ≡ the triangle XYZ , then $\overline{AC}$ ≡ .....

(a) $\overline{AB}$ (b) $\overline{XY}$ (c) $\overline{YZ}$ (d) $\overline{XZ}$

3 If two adjacent angles are supplementary , then their outer sides are .....

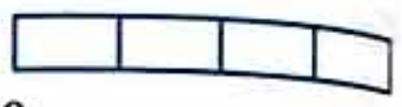
(a) perpendicular . (b) coincident.

(c) skew. (d) on the same straight line.

4 If the perimeter of a square is 24 cm. , then its area is .....

(a) 8 cm^2. (b) 9 cm^2. (c) 3 cm^2. (d) 36 cm^2.

5 **In the opposite figure :** The number of rectangles = ...



(a) 4 (b) 6 (c) 8 (d) 10

6 If L // M , L // N , then the two straight lines M and N are .....

(a) perpendicular. (b) parallel. (c) intersecting. (d) congruent.

2 Complete :

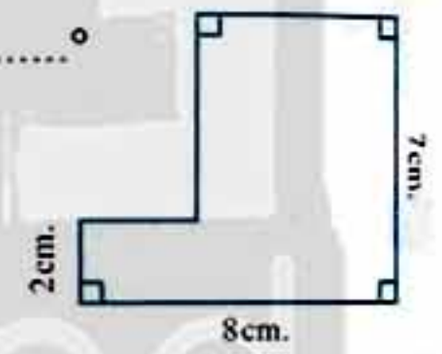
1 Two triangles are congruent if two sides and ..... congruent with the corresponding parts from the other triangle.

2 If a straight line cuts two straight lines and two corresponding angles are equal in measure , then the two straight lines are .....

3 The angle of measure 50° complements an angle of measure .....°

4 Two angles are congruent if .....

5 The perimeter of the opposite figure equals ..... cm.



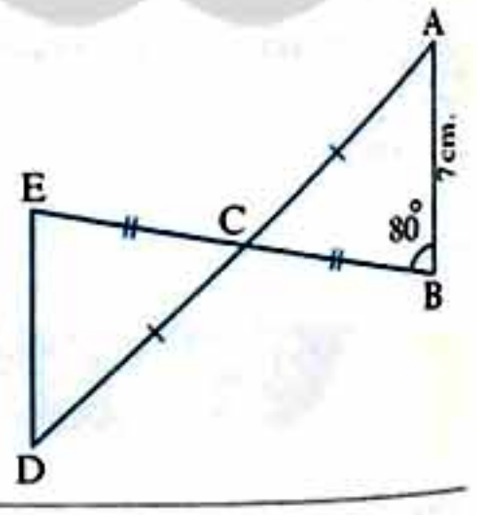
3 [a] Use the geometric instruments to draw ∠ ABC of measure 125° , then bisect it. (Don't remove the arcs)

[b] In the opposite figure :

$\overline{AD} \cap \overline{BE} = \{C\}$, AC = CD , BC = CE , AB = 7 cm. , m (∠ B) = 80°

1 Is Δ ABC ≡ Δ DEC ? Why ?

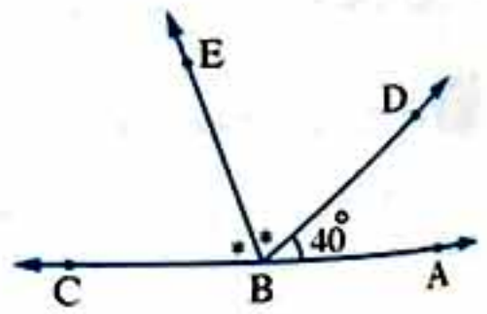
2 **Find :** The length of $\overline{ED}$, m (∠ E)



4 [a] In the opposite figure :

$B \in \overleftrightarrow{AC}$, $\overrightarrow{BE}$ bisects ∠ DBC , m (∠ ABD) = 40°

Find : m (∠ DBC) , m (∠ ABE)



[b] In the opposite figure :

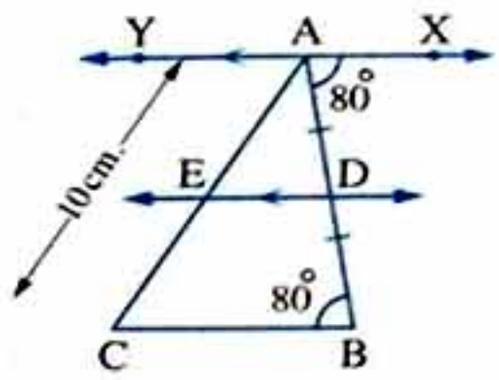
$\overleftrightarrow{XY} \parallel \overleftrightarrow{DE}$

, m (∠ XAB) = 80° , m (∠ B) = 80°

, AD = BD , AC = 10 cm.

Is $\overleftrightarrow{DE} \parallel \overline{BC}$? Why ?

Find : The length of $\overline{AE}$, give reason



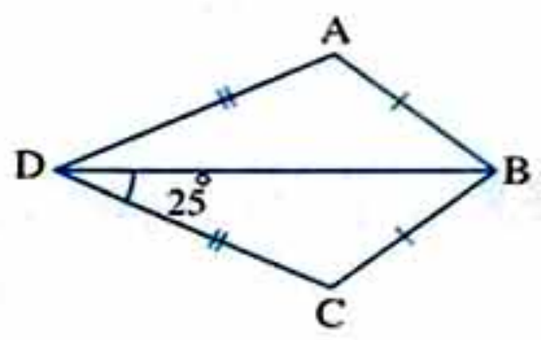
5 [a] In the opposite figure :

AB = CB , AD = CD

, m (∠ CDB) = 25°

Is Δ ABD ≡ Δ CBD ? Why ?

Find : m (∠ ADC)



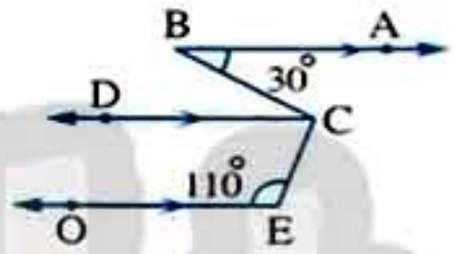
[b] In the opposite figure :

$\overrightarrow{BA} \parallel \overrightarrow{CD} \parallel \overrightarrow{EO}$

, m (∠ ABC) = 30°

, m (∠ CEO) = 110°

Find : m (∠ BCE)



11 El-Gharbia Governorate

The central Maths Supervision
Official Language Schools

Answer the following questions :

1 Choose the correct answer :

1 If m (∠ A) = 65° , then m (reflex ∠ A) = ...

(a) 305° (b) 295° (c) 25° (d) 115°

2 The acute angle complements ..... angle.

(a) a right (b) an obtuse (c) an acute (d) a straight

3 ABCD is a rectangle , then $\overline{AC} \equiv$ .....

(a) $\overline{BD}$ (b) $\overline{AD}$ (c) $\overline{DC}$ (d) $\overline{BC}$

4 The sum of measures of the accumulative angles at one point equals .....

(a) 90° (b) 180° (c) 270° (d) 360°

5 If ∠ X supplements ∠ Y and m (∠ X) = $\frac{1}{2}$ m (∠ Y) , then m (∠ Y) = ...

(a) 30° (b) 45° (c) 60° (d) 120°

6 The two straight lines parallel to a third straight line are .....

(a) intersecting. (b) parallel. (c) coincident. (d) perpendicular.

Geometry

2 Complete each of the following :

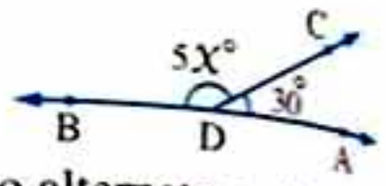
1 The angle whose measure is more than 90° and less than 180° is .....

2 Two angles are congruent if .....

3 If two adjacent angles are complementary , then their outer sides are .....

4 **In the opposite figure :**

m (∠ ADC) = 30° and m (∠ BDC) = 5 x , then x = ...



5 If a straight line intersects two parallel straight lines , then each two alternate angles are .....

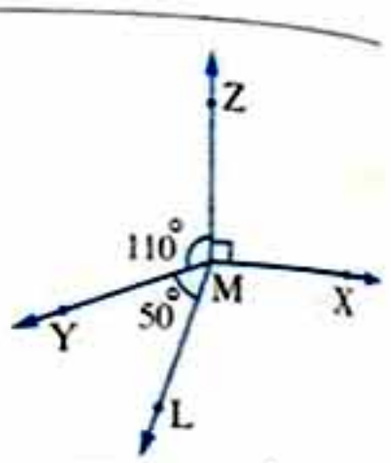
3 [a] In the opposite figure :

m (∠ XMZ) = 90°

, m (∠ ZMY) = 110°

and m (∠ YML) = 50°

Find by steps : m (∠ XML)

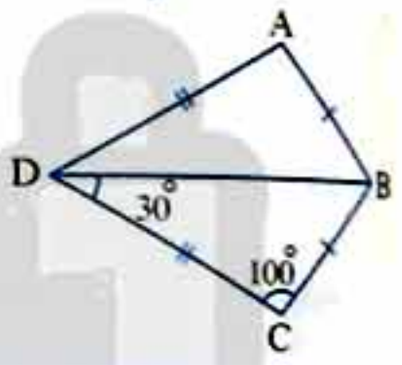


[b] In the opposite figure :

AB = CB , AD = CD , m (∠ C) = 100°

and m (∠ BDC) = 30° Is Δ ABD ≡ Δ CBD ? Why ?

, then find : m (∠ ABD) (Write the steps)

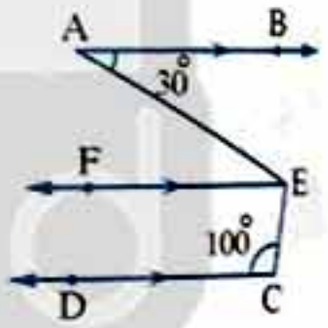


4 [a] In the opposite figure :

m (∠ C) = 100° , m (∠ A) = 30°

, $\overrightarrow{AB}$ // $\overrightarrow{EF}$ // $\overrightarrow{CD}$

Find by steps : m (∠ AEC)



[b] Draw ∠ ABC of measure 80° , then using the ruler and compasses bisect ∠ B

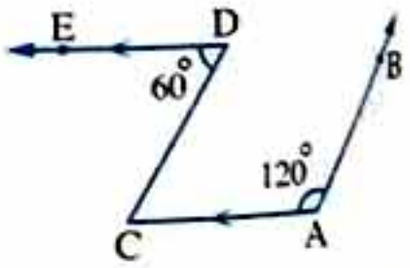
(Don't remove the arcs)

5 [a] In the opposite figure :

$\overrightarrow{DE}$ // $\overrightarrow{AC}$, m (∠ A) = 120° , m (∠ D) = 60°

1 **Find :** m (∠ C)

2 Is $\overrightarrow{AB}$ // $\overrightarrow{CD}$? Why ?

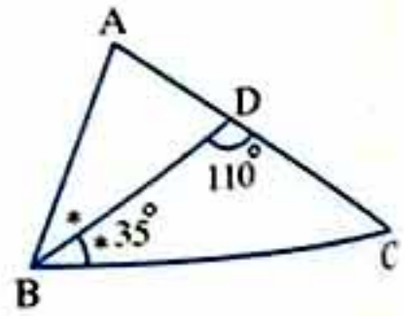


[b] In the opposite figure :

$\overrightarrow{BD}$ bisects ∠ ABC , m (∠ DBC) = 35°

, m (∠ BDC) = 110°

Find by steps : m (∠ C) and m (∠ A)



Final Examinations

12 Ismailia Governorate

Directorate of Education
Al-Manar Language School

Answer the following questions :

1 Choose the correct answer :

1 If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) + m(\angle B) = 100°$, then $m(\angle Z) =$ .....

(a) 50° (b) 80° (c) 90° (d) 100°

2 If $\angle M \equiv \angle N$ and $\angle M$, $\angle N$ are supplementary angles , then $m(\angle M) =$ .....

(a) 180° (b) 45° (c) 360° (d) 90°

3 The sum of the measures of the accumulative angles at a point is ..... right angles.

(a) 360 (b) 2 (c) 4 (d) 630

4 If two straight lines are parallel to a third straight line , then they are .....

(a) perpendicular. (b) parallel. (c) coincident. (d) intersecting.

5 The measure of the complement of an angle of measure 20° is .....

(a) 70° (b) 180° (c) 90° (d) 160°

6 The type of the angle of measure 185° is ..... angle.

(a) an acute. (b) a reflex. (c) an obtuse. (d) a straight.

2 Complete :

1 If $\Delta ABC \equiv \Delta XYZ$, then $AC - XZ =$ .....

2 The two adjacent angles formed by intersecting of a straight line and a ray are .....

3 If a straight line intersects two parallel lines , then each two corresponding angles are .....

4 Two triangles are congruent if two sides and the ..... angle of one of them are congruent to their corresponding parts of the other.

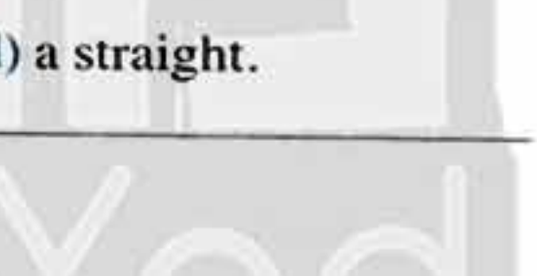
5 The right angle supplements an angle of measure .....°

3 [a] In the opposite figure :

$\overrightarrow{BA} // \overrightarrow{CD}$, $\overrightarrow{CB} // \overrightarrow{DE}$

, $m(\angle B) = 110°$

Find : $m(\angle D)$

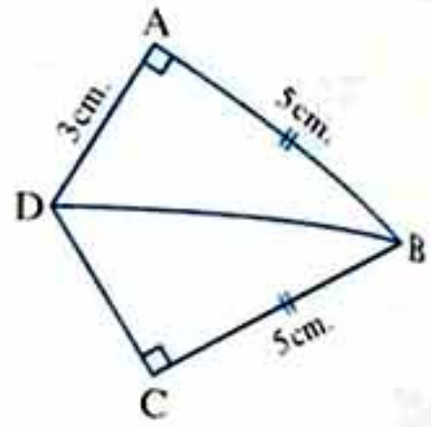


Geometry

[b] In the opposite figure :

$m(\angle A) = m(\angle C) = 90°$

, $AB = BC = 5$ cm. , $AD = 3$ cm.



1 Mention the conditions for ΔABD , ΔCBD to be congruent.

2 **Find :** The length of $\overline{CD}$

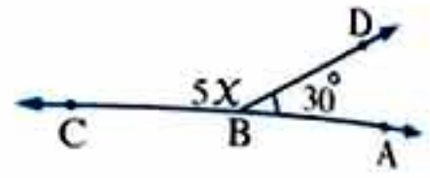
4 [a] In the opposite figure :

$\overleftrightarrow{AC} \cap \overleftrightarrow{BD} = \{B\}$

, $m(\angle ABD) = 30°$

, $m(\angle DBC) = 5\,x$

Find in degrees : The value of x

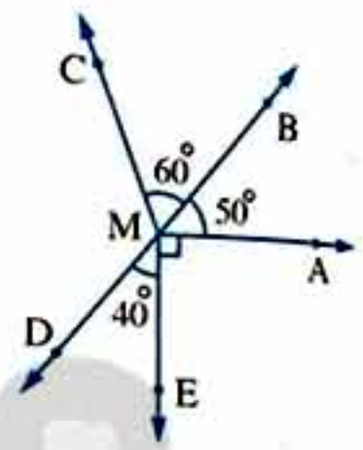


[b] In the opposite figure :

$m(\angle AME) = 90°$, $m(\angle AMB) = 50°$

, $m(\angle BMC) = 60°$, $m(\angle DME) = 40°$

Find : $m(\angle DMC)$



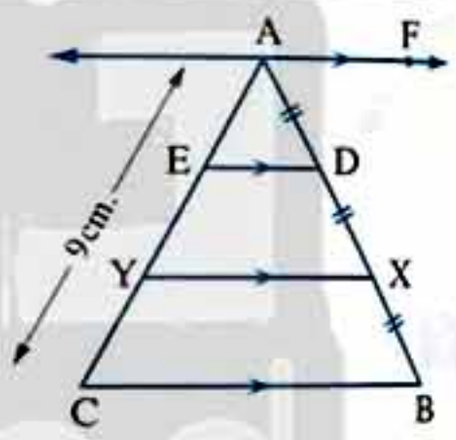
5 [a] In the opposite figure :

$\overleftrightarrow{AF} // \overleftrightarrow{ED} // \overleftrightarrow{YX} // \overleftrightarrow{CB}$

, $AD = DX = XB$

, $AC = 9$ cm.

Find : The length of $\overline{AY}$



[b] Using the geometric tools , draw $\angle ABC$ whose measure is 120° , then draw the bisector of $\angle ABC$

13 Damietta Governorate

Damiotta Education Zone
Inspector of Math

Answer the following questions :

1 Choose the correct answer :

1 The angle of measure 95° 60̀ is supplementary to an angle of measure .....°

(a) 75 (b) 84 (c) 90 (d) 100

2 The triangle whose perimeter is 12 cm. and the lengths of its two sides are 2 cm. , 5 cm. , is called .....

(a) isosceles. (b) equilateral. (c) right. (d) scalene.

3 The two vertically opposite angles are .....
(a) corresponding. (b) congruent. (c) supplementary. (d) alternate.

4 If $\overline{AB}$, $\overline{CD}$ are congruent , then AB – CD = ...
(a) zero (b) 1 (c) 2 (d) 3

5 If the two triangles ABC , XYZ are congruent , m (∠ X) = 50° and m (∠ Z) = 60° , then m (∠ B) = ...°
(a) 50 (b) 60 (c) 70 (d) 110

6 If two straight lines are parallel to a third , then they are .....
(a) perpendicular. (b) parallel. (c) coincident. (d) intersecting.

2 Complete :

1 The perpendicular straight line to a line segment from its midpoint , is called .....

2 If a straight line cuts two parallel straight lines , then each two alternate angles are .....

3 If m (∠ B) = 115° , then m (reflex ∠ B) = ...°

4 The two adjacent angles resulting from intersection of a ray and a straight line are .....

5 If the triangle ABC ≡ the triangle XYZ , then m (∠ C) = m (∠ .....)

3 [a] Draw $\overline{AB}$ of length 6 cm. , then draw its axis of symmetry by using geometrical tools. (Don't remove the arcs)

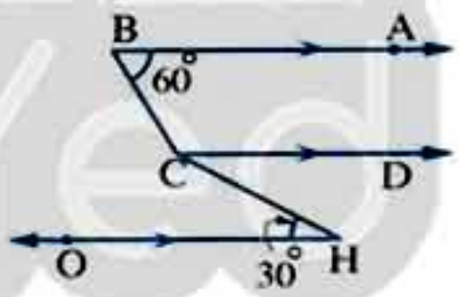
[b] In the opposite figure :

$\overrightarrow{BA} // \overrightarrow{CD} // \overrightarrow{HO}$

, m (∠ H) = 30°

, m (∠ B) = 60°

Find : m (∠ BCH) , give reason.

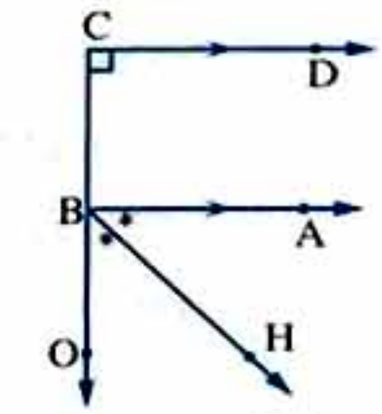


4 [a] In the opposite figure :

$\overrightarrow{CD} // \overrightarrow{BA}$, m (∠ C) = 90°

, $\overrightarrow{BH}$ bisects ∠ ABO

Find : m (∠ OBH) , give reason.



[b] In the opposite figure :

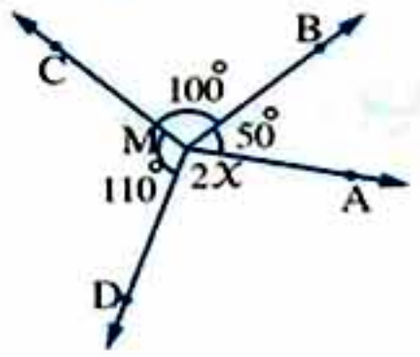
m (∠ AMB) = 50°

, m (∠ BMC) = 100°

, m (∠ CMD) = 110°

, m (∠ AMD) = 2 x

Find : The value of x , give reason.



Geometry

5 **[a]** Mention two cases of congruency of two triangles.

[b] In the opposite figure :

If AB = AD , BC = 4 cm.

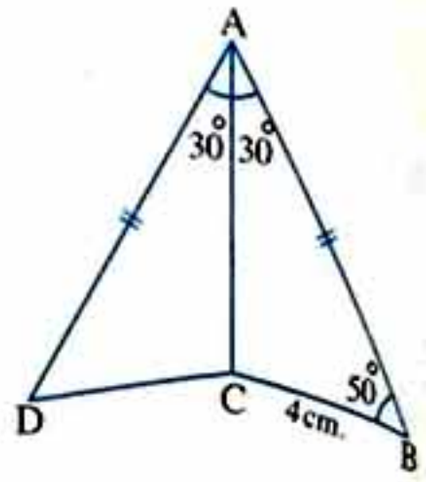
, m (∠ B) = 50°

, m (∠ BAC) = m (∠ DAC) = 30°

Are the two triangles BAC and DAC congruent ?

Write the conditions and the results.

, **then find :** m (∠ D) , the length of $\overline{CD}$



14 Beni Suef Governorate — Directorate of Official Language Schools

Answer the following questions :

1 **Choose the correct answer :**

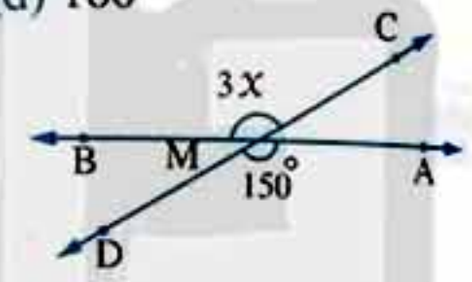
1 Two complementary angles are two angles whose sum of their measures is .....

(a) 45° (b) 90° (c) 100° (d) 180°

2 **In the opposite figure :**

If $\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, m (∠ AMD) = 150°

and m (∠ CMB) = 3 x , then the value of x = ...



(a) 25° (b) 50° (c) 100° (d) 150°

3 If Δ ABC ≡ Δ XYZ , then AC = ...

(a) BC (b) YZ (c) XZ (d) XY

4 If two straight lines are parallel to a third straight line , then these two straight lines are ..... to each other.

(a) intersecting (b) perpendicular (c) coincident (d) parallel

5 The angle of measure 179° is ..... angle.

(a) an acute (b) a right (c) an obtuse (d) a straight

6 $\overline{AB}$ ..... $\overrightarrow{AB}$

(a) $\in$ (b) $\notin$ (c) $\subset$ (d) $\not\subset$

2 **Complete :**

1 The reflex angle is the angle whose measure is more than .....° and less than .....°

2 Two triangles are congruent if two angles and .....

3 If $\angle A \equiv \angle B$ and $m(\angle A) = 50°$, then $m(\angle B) =$ .....°

4 If a straight line intersects two parallel straight lines , then every two interior angles on one side of the transversal are .....

5 In ΔABC , if $m(\angle A) = 40°$ and $m(\angle B) = 80°$, then $m(\angle C) =$ .....°

---

3 [a] Using the geometric instruments , draw $\angle ABC$ of measure $120°$, then draw $\overrightarrow{BF}$ to bisect the angle. (Don't remove the arcs)

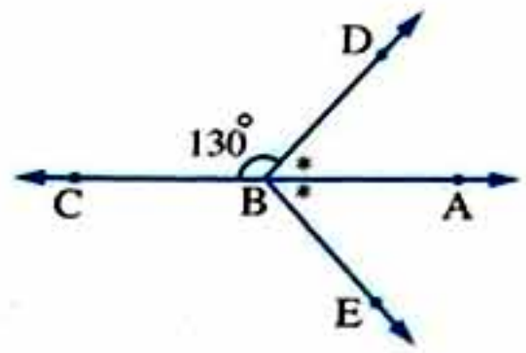
[b] **In the opposite figure :**

If $B \in \overleftrightarrow{AC}$

, $m(\angle DBC) = 130°$

and $\overrightarrow{BA}$ bisects $\angle DBE$

, find : $m(\angle ABD)$ and $m(\angle DBE)$ (Give reason)



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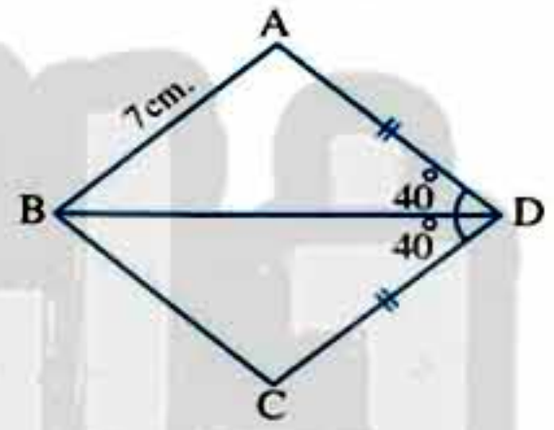
4 [a] **In the opposite figure :**

$AD = DC$, $AB = 7$ cm.

and $m(\angle ADB) = m(\angle BDC) = 40°$

1 **Prove that :** $\Delta ABD \equiv \Delta CBD$

2 **Find :** The length of $\overline{BC}$ (Give reason)

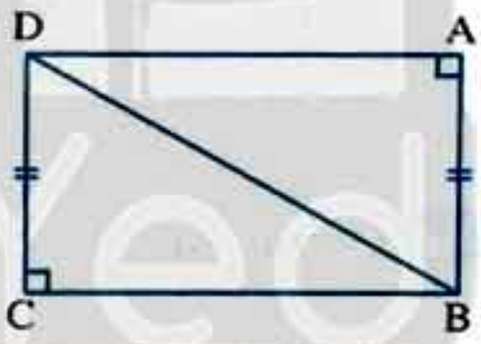


[b] **In the opposite figure :**

$m(\angle BAD) = m(\angle BCD) = 90°$

and $AB = DC$

Is $\Delta ABD \equiv \Delta CDB$? Why ?



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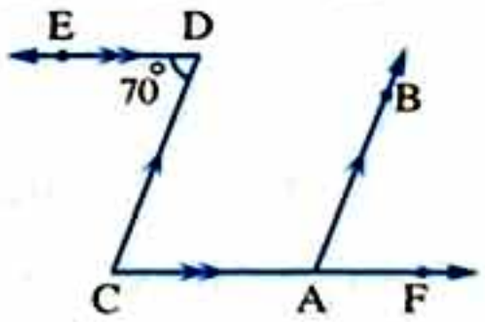
5 [a] **In the opposite figure :**

$\overrightarrow{AB} // \overrightarrow{CD}$, $\overrightarrow{DE} // \overrightarrow{CA}$

and $m(\angle EDC) = 70°$

Find : $m(\angle DCA)$ and $m(\angle BAF)$ (Give reason)

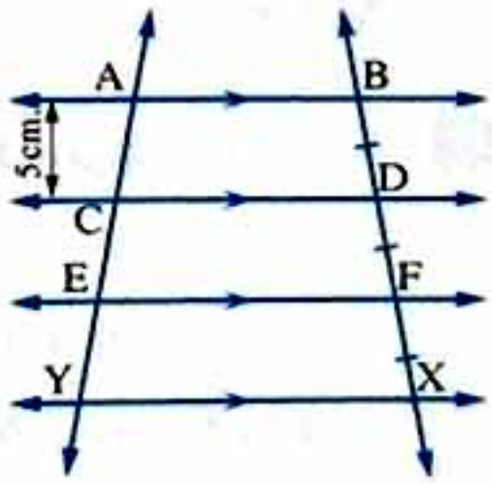


[b] **In the opposite figure :**

$\overleftrightarrow{AB} // \overleftrightarrow{CD} // \overleftrightarrow{EF} // \overleftrightarrow{XY}$, $AC = 5$ cm.

and $BD = DF = FX$

Find : The length of $\overline{AY}$ (Give reason)



15 South Sinai Governorate — Tur Sinai Educational Zone

Answer the following questions :

1 Choose the correct answer :

1 The angle whose measure is 30° complements the angle whose measure is .....°

(a) 90 (b) 180 (c) 60 (d) 150

2 The sum of measures of the two supplementary angles equals .....°

(a) 90 (b) 100 (c) 360 (d) 180

3 If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) = 60°$, $m(\angle B) = 40°$, then $m(\angle Z)$ = ...°

(a) 100 (b) 70 (c) 80 (d) 90

4 If $m(\angle X) = 100°$, then m (reflex $\angle X$) = ...°

(a) 360 (b) 180 (c) 260 (d) 80

5 If two straight lines intersect , then each two ..... angles are equal in measure.

(a) corresponding (b) alternate (c) adjacent (d) vertically opposite

6 The sum of measures of two adjacent angles formed by the intersection of a straight line and a ray with a starting point on this straight line equals .....°

(a) 90 (b) 180 (c) 270 (d) 360

2 Complete :

1 The two perpendicular lines on a third are .....

2 A circle of radius length 7 cm. , then its area = ... cm^2. $\left(\text{where } \pi = \frac{22}{7}\right)$

3 The two right-angled triangles are congruent if ..... , ... are congruent to their corresponding parts in the other triangle.

4 If the two lines L_1 , L_2 are two parallel lines , then $L_1 \cap L_2$ = ...

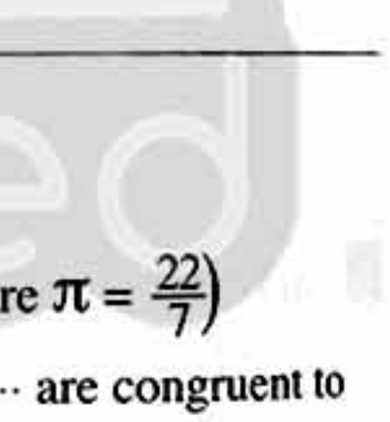
5 The measure of each angle of the two equal complementary angles equals .....°

3 [a] In the opposite figure :

$m(\angle AMB) = 110°$, $m(\angle AMD) = 90°$

, $m(\angle DMC) = 40°$

Find : $m(\angle BMC)$



Final Examinations

[b] In the opposite figure :

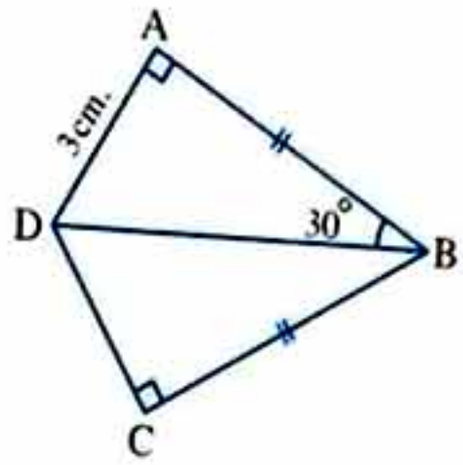
$m(\angle A) = m(\angle C) = 90°$

, $AD = 3$ cm. , $m(\angle ABD) = 30°$, $AB = BC$

Write the conditions of congruency

of the two triangles ABD , CBD

, then find : The length of $\overline{CD}$ and $m(\angle DBC)$



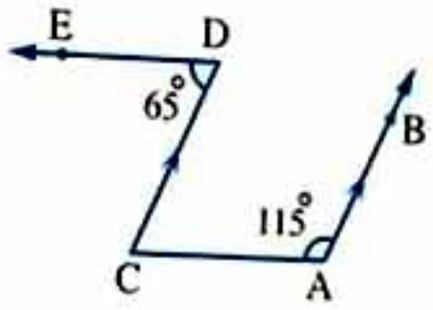
[a] In the opposite figure :

$\overrightarrow{AB} // \overline{CD}$, $m(\angle A) = 115°$

, $m(\angle D) = 65°$

Find : $m(\angle C)$

Is $\overline{AC} // \overrightarrow{DE}$? Give reason.

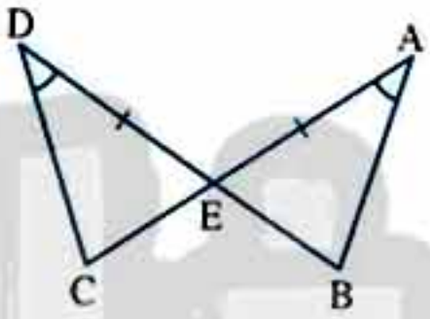


[b] In the opposite figure :

$\overline{AC} \cap \overline{BD} = \{E\}$

, $AE = ED$, $m(\angle A) = m(\angle D)$

Write the conditions of congruency of the two triangles.



5 **[a]** By using your geometric instruments , draw $\angle ABC$ whose measure is $80°$

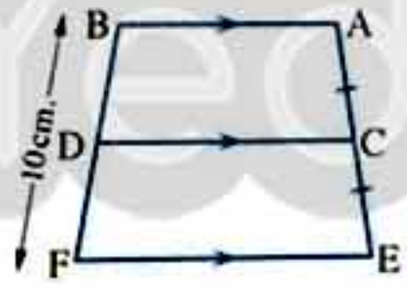
, then draw $\overrightarrow{BD}$ to bisect the angle.

[b] In the opposite figure :

$\overline{AB} // \overline{CD} // \overline{EF}$

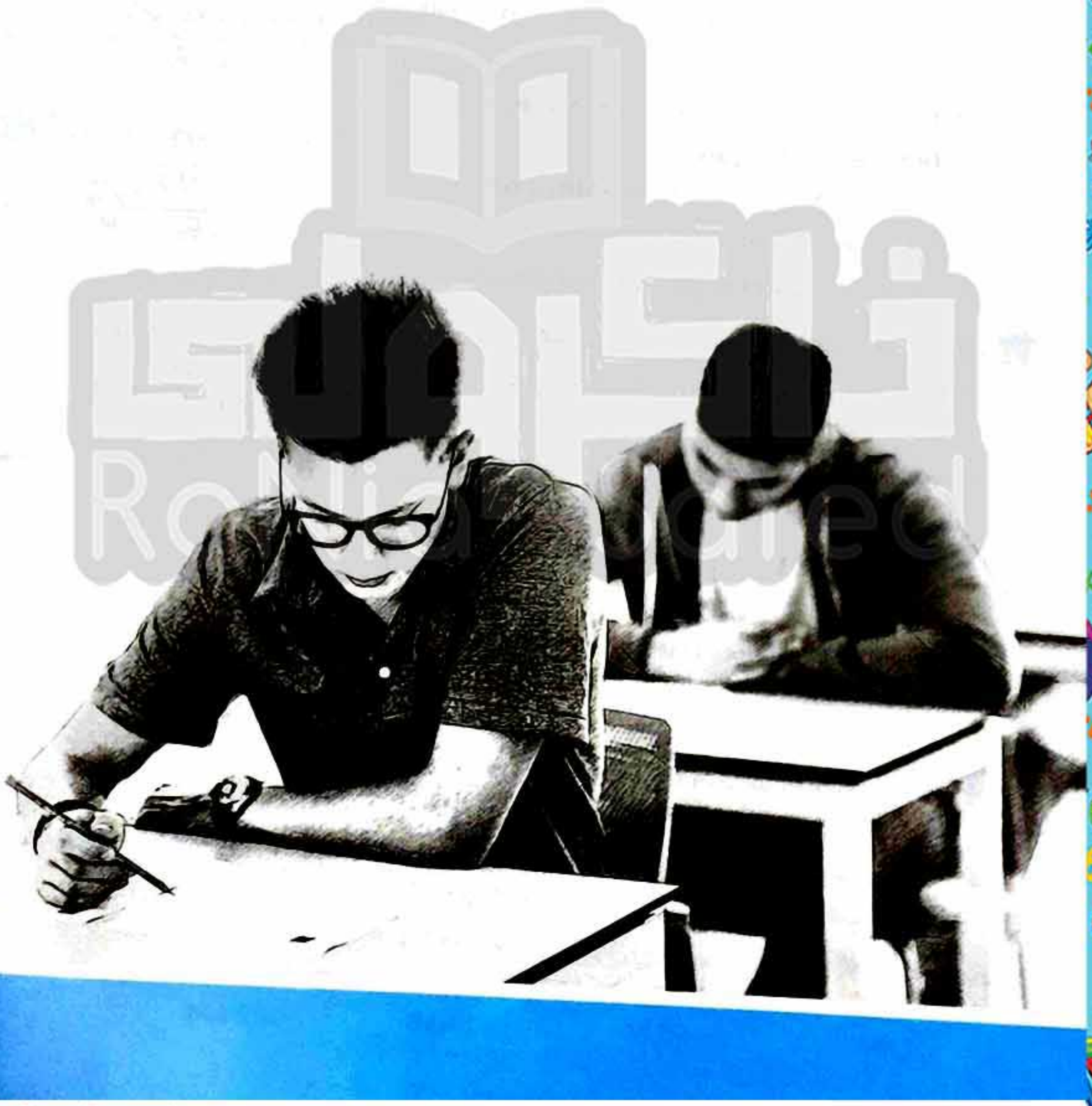
, $AC = CE$, $BF = 10$ cm.

Find by reason : The length of $\overline{BD}$



Final Examinations 2020

on Geometry



1 Cairo Governorate

Nasr City Educational Zone
St.Fatima Language School

Answer the following questions :

1 Choose the correct answer :

1 If ∠ X ≡ ∠ Y and ∠ X , ∠ Y are supplementary angles , then m (∠ X) = ...

(a) 45° (b) 90° (c) 135° (d) 180°

2 If two straight lines are perpendicular to a third , then the two straight lines are .....

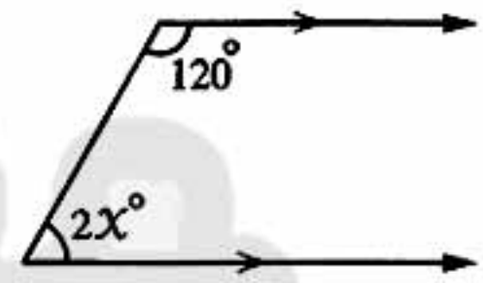
(a) perpendicular. (b) parallel. (c) intersecting. (d) congruent.

3 If Δ ABC ≡ Δ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ...

(a) 90° (b) 100° (c) 50° (d) 80°

4 **From the opposite figure :**

x = ...



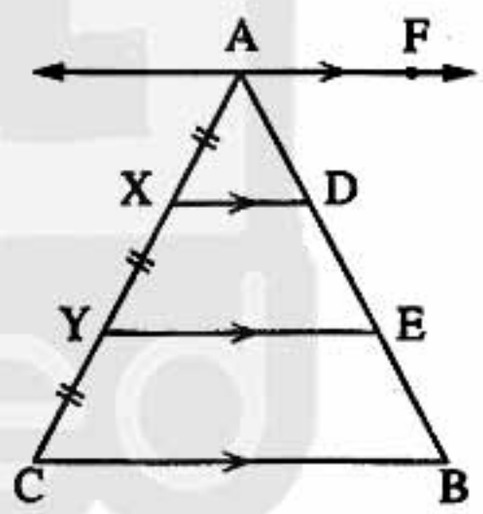
(a) 60° (b) 140°

(c) 30° (d) 180°

5 **In the opposite figure :**

$\overleftrightarrow{AF} // \overline{XD} // \overline{YE} // \overline{CB}$

, AX = XY = YC , then AD : AB = ...



(a) 1 : 1 (b) 1 : 2 (c) 1 : 3

6 If Δ ABC ≡ Δ LMN , then m (∠ ACB) = m (∠ .....)

(a) LMN (b) MLN (c) LNM (d) NLM

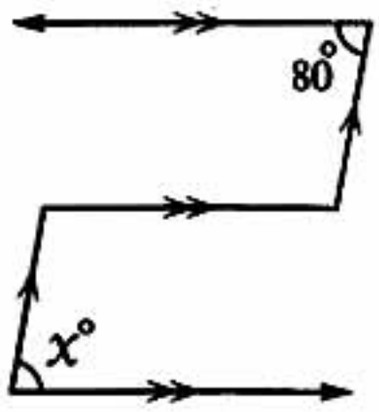
2 Complete :

1 If the ratio between the measures of two adjacent supplementary angles is 1 : 2 , then the measure of the largest angle is .....°

2 If m (∠ A) = 120° , then m (reflex ∠ A) = ...°

3 Two triangles are congruent if each side of .....

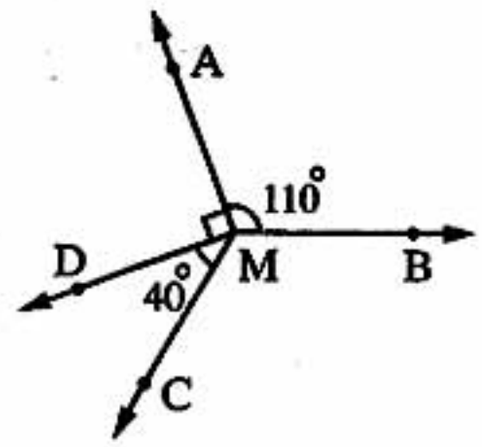
4 **From the opposite figure :**



x = ...°

5 **From the opposite figure :**

m (∠ BMC) = ...°



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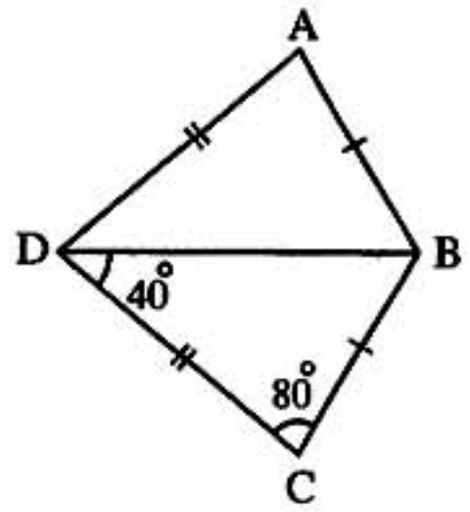
3 **[a] In the opposite figure :**

AB = BC , AD = CD

, m (∠ C) = 80°

, m (∠ BDC) = 40°

Prove that : Δ CBD ≡ Δ ABD **and find :** m (∠ ABD)

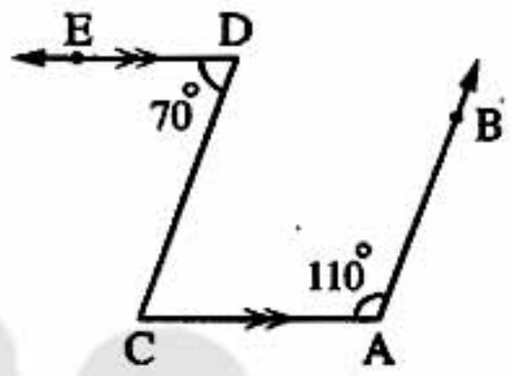


[b] In the opposite figure :

$\overrightarrow{DE}$ // $\overline{AC}$, m (∠ A) = 110°

, m (∠ D) = 70°

Prove that : $\overrightarrow{AB}$ // $\overline{CD}$



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4 **[a] In each of the following figures , find the value of x and give reason to your answer :**

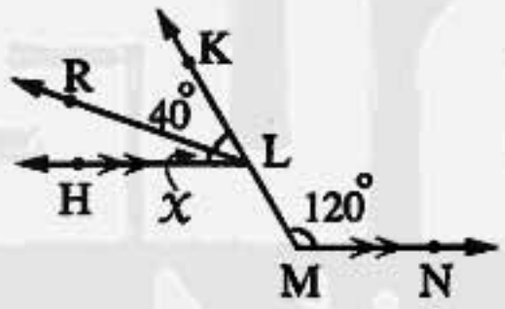

Fig. (1)

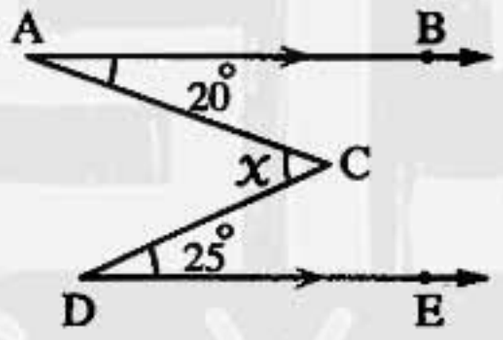

Fig. (2)

[b] Draw any acute-angled triangle , construct the perpendicular bisector of each side.

Do the perpendicular bisectors intersect at one point ?

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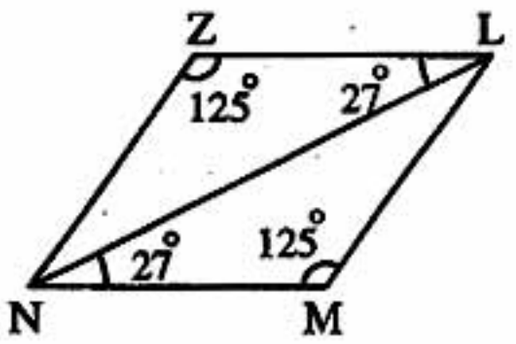
5 **[a] From the opposite figure :**

Prove that :

The two triangles LMN and NZL are congruent

, then find : m (∠ LNZ)



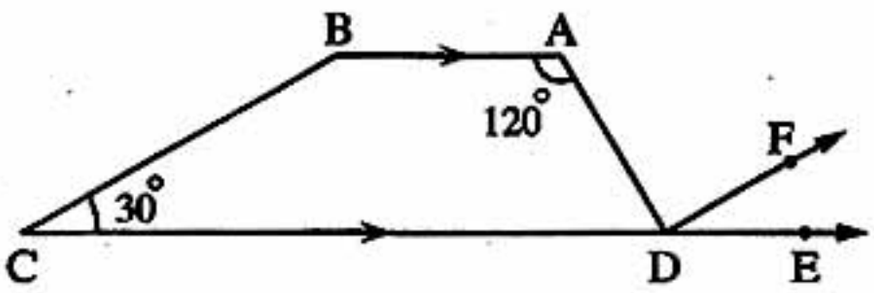
[b] In the opposite figure :

$\overline{AB}$ // $\overrightarrow{CE}$, m (∠ BAD) = 120°

, m (∠ BCD) = 30°

, m (∠ BAD) is four times m (∠ FDE)

Prove that : $\overrightarrow{DF}$ // $\overline{BC}$ **and** $\overrightarrow{DF}$ ⊥ $\overline{AD}$



2 Cairo Governorate

El-Zaitoun Educational Zone
El-Ma'aref Modern Language School

Answer the following questions :

1 Choose the correct answer :

1 If two straight lines are perpendicular to a third , then the two straight lines are .....

(a) perpendicular. (b) parallel. (c) congruent. (d) intersecting.

2 If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) + m(\angle B) = 100°$, then $m(\angle Z) =$ .....

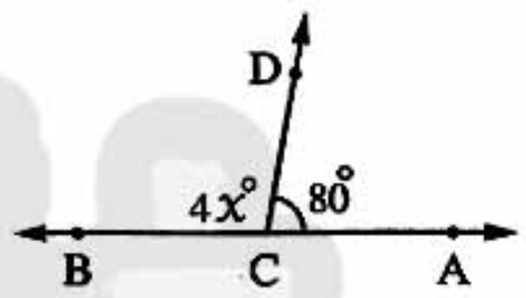
(a) 50° (b) 90° (c) 80° (d) 100°

3 The image of the point $(-3 , 5)$ by translation of 3 units in the negative direction of the y-axis is .....

(a) $(-3 , 2)$ (b) $(-3 , 8)$ (c) $(-6 , 5)$ (d) $(0 , 8)$

4 **In the opposite figure :**

$\overleftrightarrow{BA} \cap \overrightarrow{CD} = \{C\}$, $m(\angle DCA) = 80°$, then $x =$ .....



(a) 20° (b) 25° (c) 30° (d) 100°

5 If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) = 50°$, $m(\angle Y) = 60°$, then $m(\angle C) =$ .....

(a) 50° (b) 60° (c) 70° (d) 80°

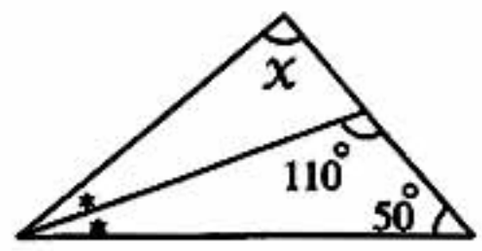
6 The measure of the supplement of the angle whose measure is 30° equals .....

(a) 60° (b) 180° (c) 90° (d) 150°

2 Complete the following :

1 If a straight line intersects two parallel straight lines , then each two corresponding angles are .....

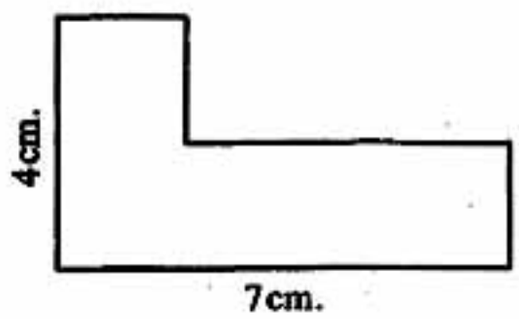
2 **In the opposite figure :**



$x =$ .....

3 If $\angle X$ complements $\angle Y$ and $\angle X \equiv \angle Y$, then $m(\angle X) =$ .....°

4 The perimeter of the opposite figure is ..... cm.

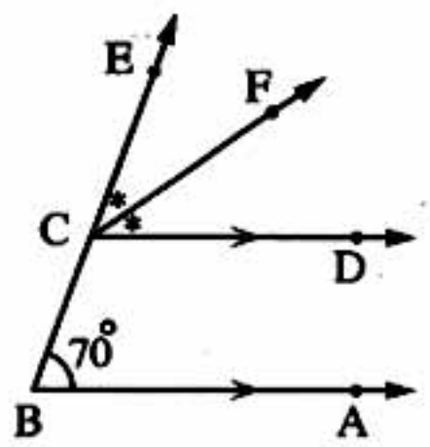


5 The two right-angled triangles are congruent if .....

3 **[a] From the opposite figure , find :**

m (∠ ECF)

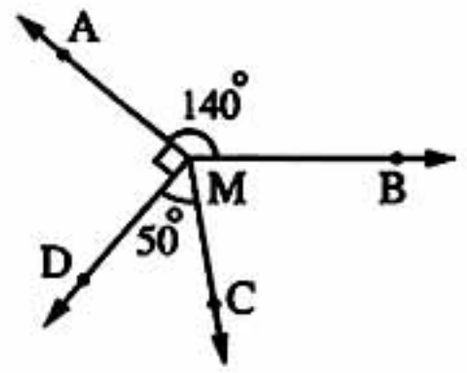
Give the reason.



[b] From the opposite figure , find :

m (∠ BMC)

With steps.

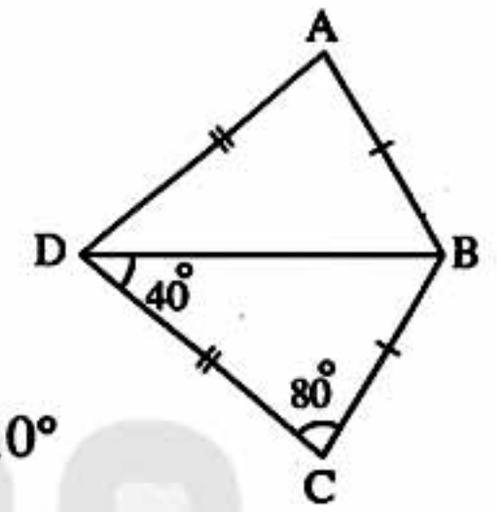


4 **[a] In the opposite figure :**

AB = BC , AD = CD , m (∠ C) = 80° , m (∠ BDC) = 40°

1 **Prove that :** Δ CBD ≡ Δ ABD

2 **Find :** m (∠ ABD)

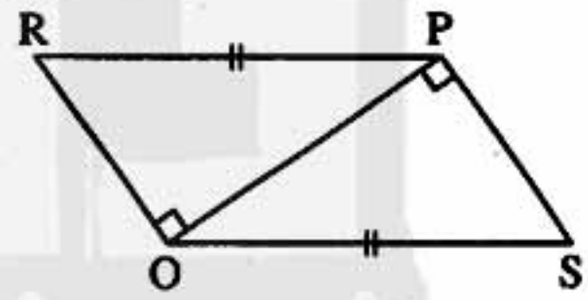


[b] By using your geometric instruments , draw ∠ ABC of measure 110° , then draw $\overrightarrow{BF}$ to bisect the angle.

5 **[a] From the opposite figure :**

Prove that : 1 Δ ROP ≡ Δ SPO

2 m (∠ RPS) = m (∠ SOR)

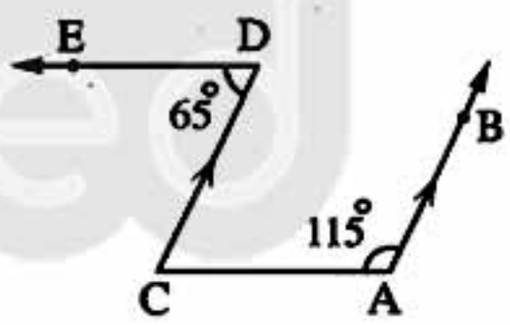


[b] In the opposite figure :

If $\overrightarrow{AB}$ // $\overline{CD}$, m (∠ D) = 65° , m (∠ A) = 115°

, then prove that :

$\overline{AC}$ // $\overrightarrow{DE}$



3 Cairo Governorate

Zone Educative Abdine
Lycee Bab El-Louk

Answer the following questions :

1 **Choose the correct answer :**

1 If ∠ X complements ∠ Y and ∠ X ≡ ∠ Y , then m (∠ X) = ...

(a) 45° (b) 90° (c) 180° (d) 360°

2 If Δ ABC ≡ Δ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ...

(a) 50° (b) 80° (c) 90° (d) 100°

3 If two straight lines are perpendicular to a third , then the two straight lines are .....

(a) perpendicular. (b) parallel. (c) congruent. (d) intersecting.

4 The sum of the measures of the accumulative angles at a point is .....

(a) 630° (b) 180° (c) 90° (d) 360°

5 The measure of the supplement of the angle whose measure is 30° equals .....

(a) 60° (b) 180° (c) 150° (d) 90°

6 The angle whose measure is more than 90° and less than 180° is ..... angle.

(a) an obtuse (b) an acute (c) a right (d) a straight

2 Complete the following :

1 The two triangles are congruent if two sides and ..... are congruent with the corresponding parts of the other.

2 If $\Delta ABC \equiv \Delta XYZ$, then $m(\angle Z) = m(\angle$ .....)

3 The sum of the measures of the accumulative angles at a point equals .....°

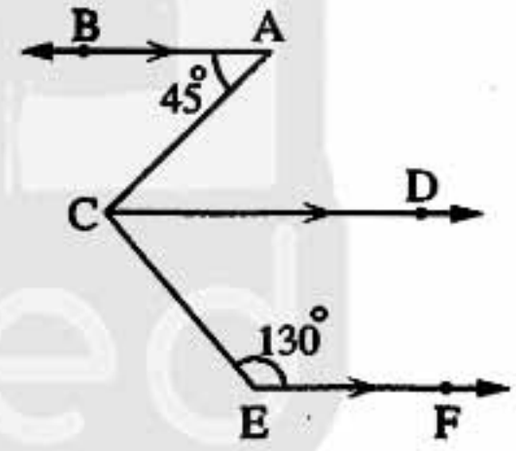
4 If $m(\angle A) = 110°$, then m (reflex $\angle A$) = ...°

5 The two adjacent angles formed by intersecting of a straight line and a ray are .....

3 [a] In the opposite figure :

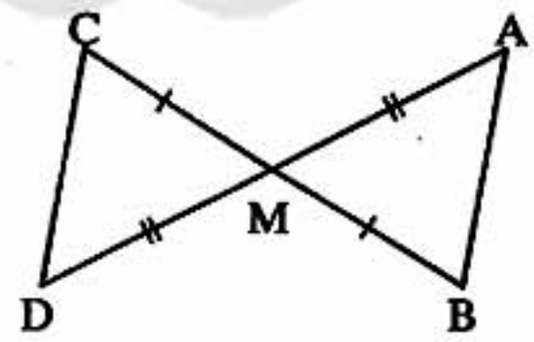
$\overrightarrow{AB} // \overrightarrow{CD} // \overrightarrow{EF}$, $m(\angle A) = 45°$, $m(\angle E) = 130°$

Find : $m(\angle ACE)$



[b] In the opposite figure :

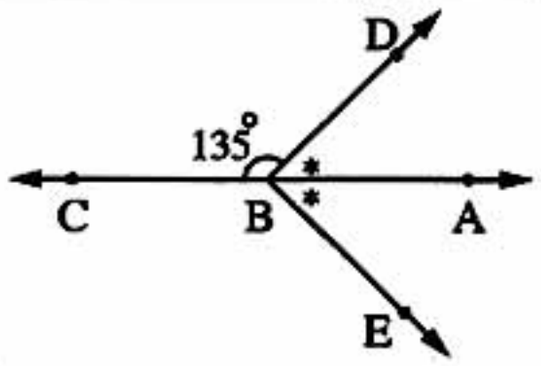
$\overline{AD} \cap \overline{BC} = \{M\}$, BM = MC , AM = MD , write the conditions for ΔAMB , ΔDMC to be congruent.



4 [a] In the opposite figure :

If $B \in \overleftrightarrow{AC}$, $m(\angle DBC) = 135°$ and $\overrightarrow{BA}$ bisects $\angle DBE$

Find : 1 $m(\angle ABD)$ 2 $m(\angle DBE)$ 3 $m(\angle CBE)$



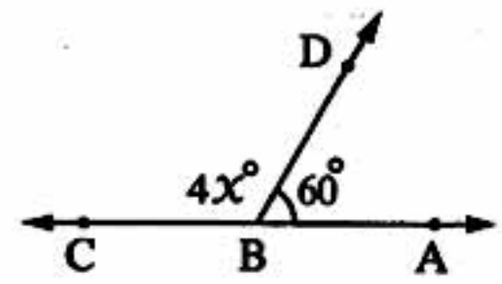
[b] By using your geometric instruments , draw $\angle ABC$ whose measure is 130° , then draw $\overrightarrow{BF}$ to bisect the angle.

5 **[a] In the opposite figure :**

$\overleftrightarrow{AC} \cap \overrightarrow{BD} = \{B\}$

, m (∠ ABD) = 60°

, m (∠ DBC) = 4 x°

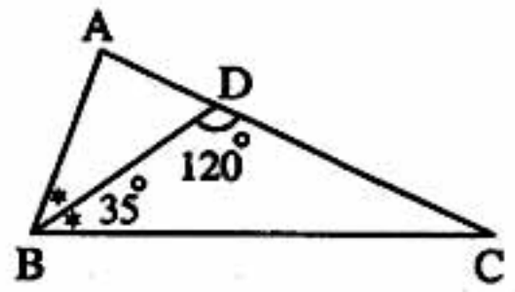


Find in degrees : The value of x

[b] In the opposite figure :

$\overrightarrow{BD}$ bisects ∠ ABC , m (∠ DBC) = 35°

, m (∠ BDC) = 120°



Find : m (∠ A) in degrees.

4 Giza Governorate

El-Haram Zone
El-Maarefa Exp. Lang. School

Answer the following questions :

1 **Choose the correct answer :**

1 If Δ ABC ≡ Δ XYZ , m (∠ A) = 50° , m (∠ B) = 60° , then m (∠ Z) = ...

(a) 50° (b) 60° (c) 70° (d) 120°

2 The sum of measures of the accumulative angles at a point equals .....

(a) 180° (b) 630° (c) 360° (d) 603°

3 The angle whose measure is 78° 60̀ , is ..... angle.

(a) a right (b) an acute (c) an obtuse (d) a straight

4 If ∠ A ≡ ∠ B and ∠ A complements ∠ B , then m (∠ A) = ...

(a) 45° (b) 90° (c) 100° (d) 180°

5 If two straight lines are parallel to a third straight line , then they are .....

(a) perpendicular. (b) parallel. (c) congruent. (d) intersecting.

6 The measure of the supplement of an angle of measure 35° equals .....

(a) 65° (b) 165° (c) 180° (d) 145°

2 **Complete the following :**

1 The perpendicular bisector of a line segment is called .....

2 If m (∠ A) = 160° , then m (reflex ∠ A) = ...°

3 The two adjacent angles formed by a straight line and a ray with a start point on this straight line are .....

4 If two straight lines intersect , then each two vertically opposite angles are .....

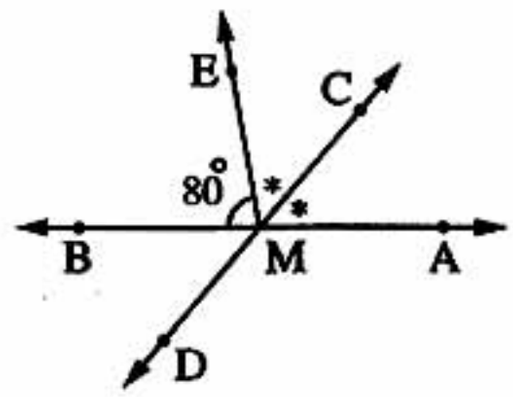
5 If $L_1 \perp L_2$ and $L_2 // L_3$, then L_1 ..... L_3

3 **[a] In the opposite figure :**

$\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, m (∠ BME) = 80°

, $\overrightarrow{MC}$ bisects ∠ AME

Find : 1 m (∠ AMC) 2 m (∠ BMD)

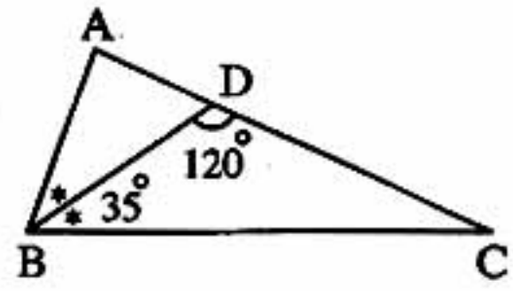


[b] In the opposite figure :

$\overrightarrow{BD}$ bisects ∠ ABC , m (∠ DBC) = 35°

, m (∠ BDC) = 120°

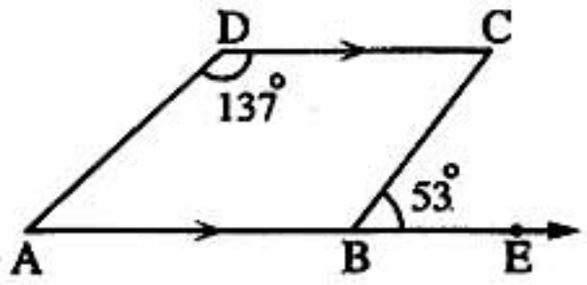
Find : m (∠ A) in degrees.



4 **[a] In the opposite figure :**

$\overrightarrow{AB} // \overline{DC}$, m (∠ EBC) = 53° , m (∠ D) = 137°

Is $\overline{BC} // \overline{AD}$? "State the reason"

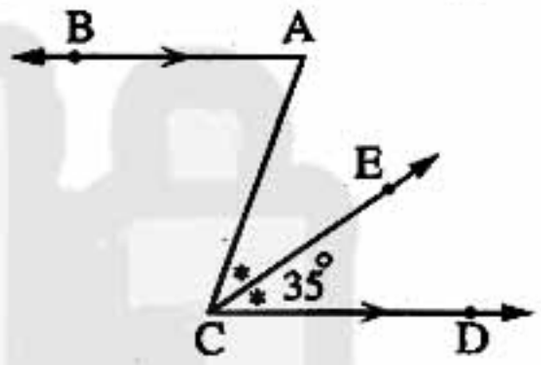


[b] In the opposite figure :

$\overrightarrow{AB} // \overrightarrow{CD}$, $\overrightarrow{CE}$ bisects ∠ ACD

, m (∠ DCE) = 35°

Find : m (∠ A)



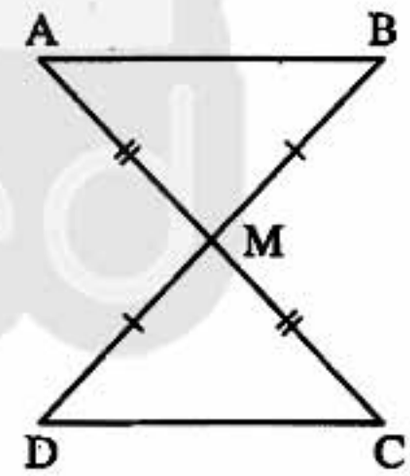
5 **[a]** Draw ∠ ABC of measure 85° , then bisect it. (Don't remove the arcs)

[b] In the opposite figure :

AM = CM

, BM = DM

Show with the reason if Δ ABM ≡ Δ CDM or not.



5 Giza Governorate

Boulaq El-Dakrour Dire. of Edu.
Dar El-Hanan Lang. Sch. for Girls

Answer the following questions :

1 **Choose the correct answer :**

1 The supplement of the angle whose measure is 30° is an angle whose measure is .....

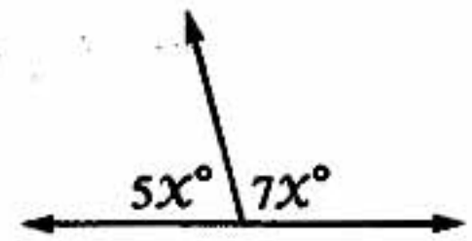
(a) 60° (b) 180° (c) 150° (d) 90°

2 If Δ ABC ≡ Δ XYZ and m (∠ A) + m (∠ B) = 110° , then m (∠ Z) = ...

(a) 50° (b) 60° (c) 70° (d) 80°

3 **From the opposite figure :**

The value of x = ...

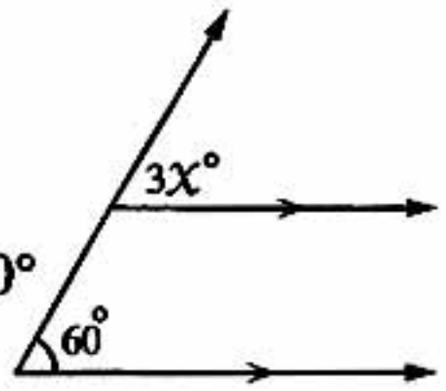


(a) 30° (b) 15°

(c) 45° (d) 18°

4 **From the opposite figure :**

x = ...



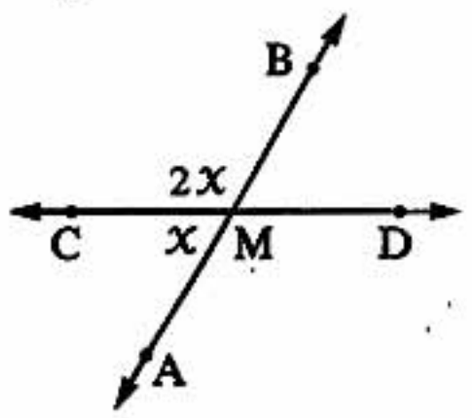
(a) 20° (b) 30° (c) 40° (d) 120°

5 The angle of measure 179° is .....

(a) acute. (b) obtuse. (c) right. (d) straight.

6 **In the opposite figure :**

$\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, then x = ...



(a) 30° (b) 60°

(c) 45° (d) 90°

2 Complete the following :

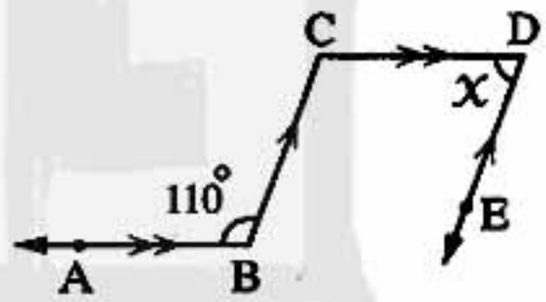
1 The complement of an angle of measure 65° is an angle of measure .....°

2 If m (∠ B) = 160° , then m (reflex ∠ B) = ...°

3 **In the opposite figure :**

$\overline{CD} // \overrightarrow{BA}$, $\overrightarrow{DE} // \overline{CB}$

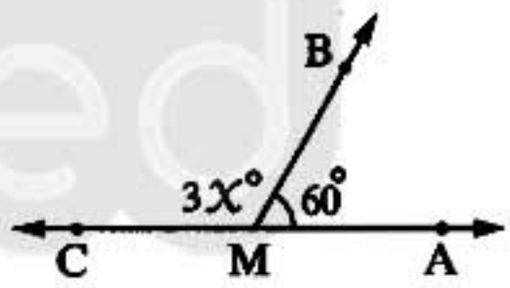
, then x = ...°



4 **In the opposite figure :**

If $\overrightarrow{MB} \cap \overleftrightarrow{AC} = \{M\}$, m (∠ AMB) = 60°

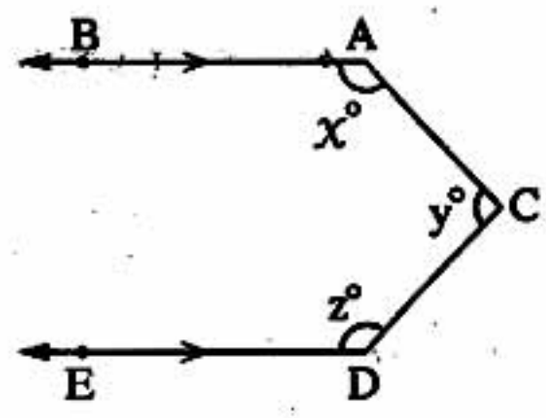
, then the value of x equals .....°



5 **In the opposite figure :**

$\overrightarrow{AB} // \overrightarrow{DE}$

, then $x + y + z$ = ...



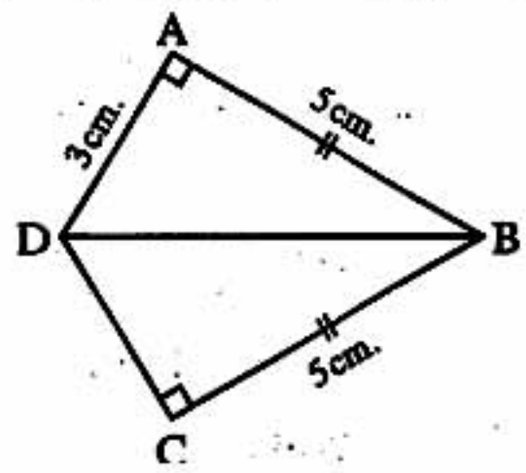
3 [a] In the opposite figure :

m (∠ A) = m (∠ C) = 90°

, AB = BC = 5 cm. , AD = 3 cm.

1 Mention the conditions for Δ ABD , Δ CBD to be congruent.

2 **Find :** The length of $\overline{CD}$

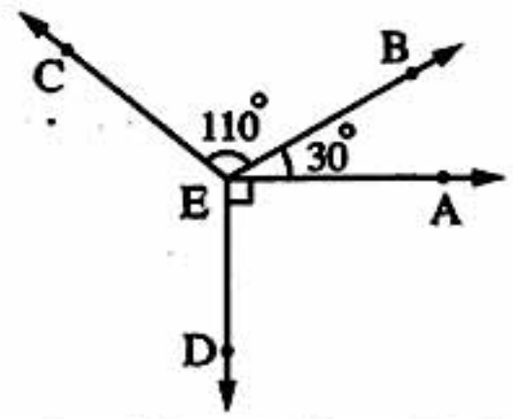


[b] In the opposite figure :

$m(\angle AEB) = 30°$, $m(\angle BEC) = 110°$

, $m(\angle AED) = 90°$

Find : $m(\angle DEC)$



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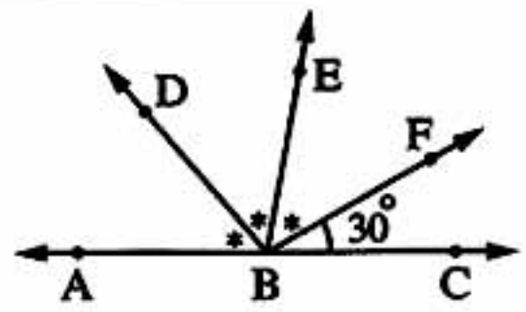
4 **[a] In the opposite figure :**

$B \in \overleftrightarrow{AC}$, $m(\angle FBC) = 30°$

, $m(\angle ABD) = m(\angle DBE) = m(\angle EBF)$

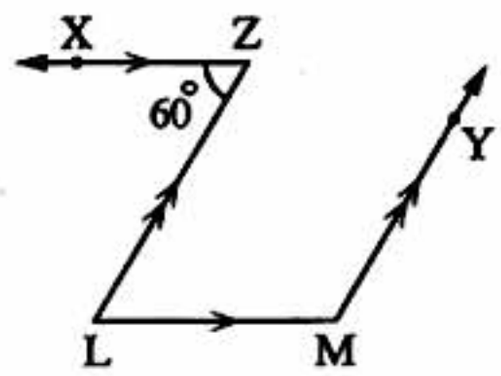
Find : $m(\angle ABE)$



[b] In the opposite figure :

$\overrightarrow{ZX} // \overrightarrow{LM}$, $\overrightarrow{LZ} // \overrightarrow{MY}$, $m(\angle Z) = 60°$

Find : [1] $m(\angle L)$ [2] $m(\angle M)$



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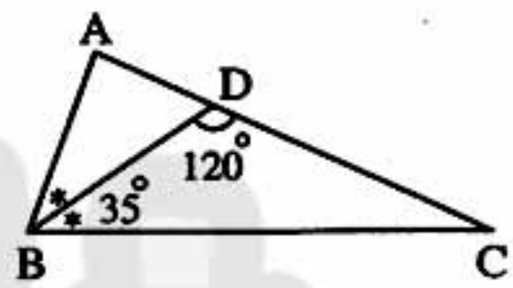
5 **[a] In the opposite figure :**

$\overrightarrow{BD}$ bisects $\angle ABC$, $m(\angle DBC) = 35°$

, $m(\angle BDC) = 120°$

Find : $m(\angle A)$

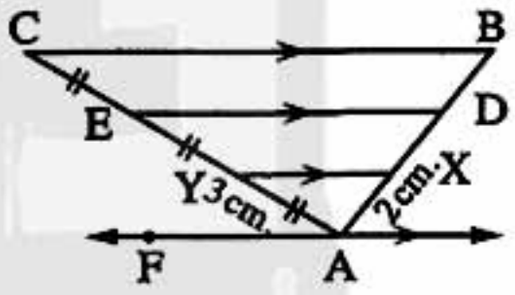


[b] In the opposite figure :

$\overleftrightarrow{AF} // \overline{XY} // \overline{DE} // \overline{BC}$ and $AY = YE = EC$, $AY = 3$ cm.

, $AX = 2$ cm. and the perimeter of $\Delta ABC = 23$ cm.

Find : The length of $\overline{BC}$



[c] Draw $\angle ABC$ of measure $100°$ and bisect it. (Don't remove the arcs)

6 Alexandria Governorate

East Educational Zone
Sidi Gaber Lang. Sch. for boys

Answer the following questions :

1 **Complete the following :**

[1] If $m(\angle A) = 120°$, then the measure of the reflex angle of $\angle A =$ ..... °

[2] The two adjacent angles formed by intersecting a straight line and a ray are .....

[3] If $\angle A$ supplements $\angle B$ and $\angle A$ supplements $\angle C$

, then $\angle B$ and $\angle C$ are .....

[4] Two triangles are congruent if the lengths of two sides and the measure of ..... are congruent with the corresponding parts of the other.

5 If ∠ A and ∠ B are complementary angles , m (∠ A) = 2 m (∠ B) , then m (∠ B) = ...°

2 Choose the correct answer :

1 If two straight lines are perpendicular to a third , then the two straight lines are .....

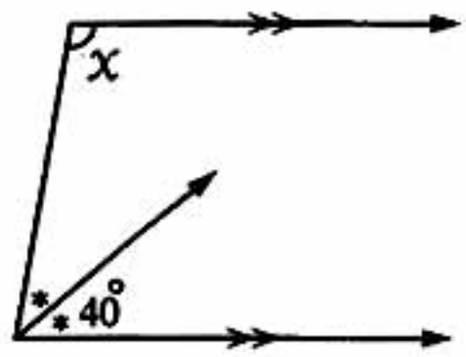
(a) perpendicular. (b) congruent. (c) parallel. (d) intersecting.

2 The axis of symmetry of a line segment is .....

(a) perpendicular from its midpoint. (b) equal to it.

(c) parallel to it. (d) congruent to it.

3 In the opposite figure :

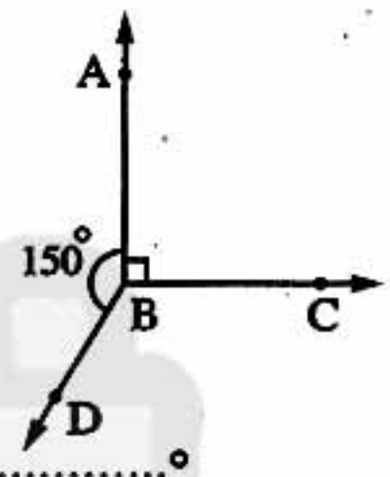


x = ...°

(a) 80 (b) 120

(c) 100 (d) 180

4 In the opposite figure :



m (∠ CBD) = ...°

(a) 100 (b) 120

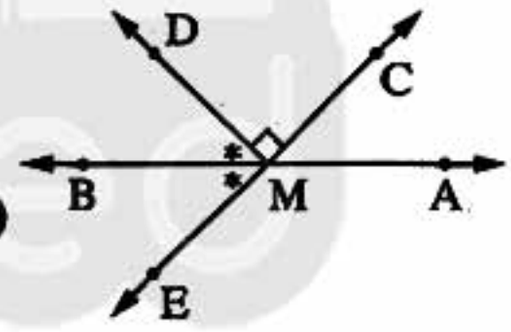
(c) 140 (d) 240

5 If Δ ABC ≡ Δ XYZ , m (∠ Z) = 55° , then m (∠ A) + m (∠ B) = ...°

(a) 110 (b) 115 (c) 120 (d) 125

3 [a] In the opposite figure :

$\overleftrightarrow{AB} \cap \overleftrightarrow{CE} = \{M\}$, $\overrightarrow{MD} \perp \overrightarrow{MC}$, $\overrightarrow{MB}$ bisects ∠ DME

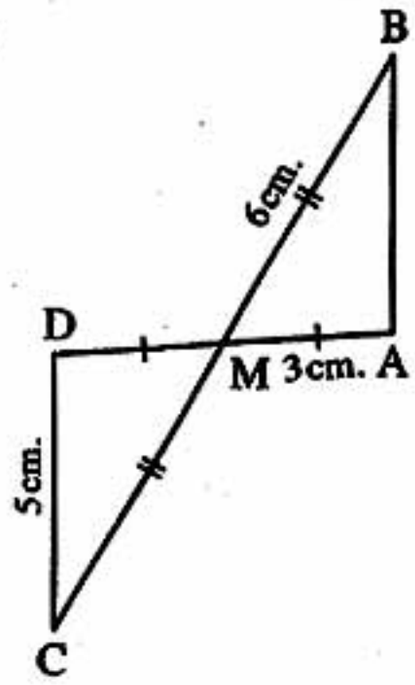


Find showing the reason : 1 m (∠ BME) 2 m (∠ AMC)

3 m (∠ AME)

[b] Draw the line segment AB of length 8 cm. , then construct the axis of symmetry of $\overline{AB}$ (Don't remove the arcs)

4 [a] In the opposite figure :



Complete :

1 Δ ABM ≡ Δ .....

2 m (∠ B) = m (∠ .....)

3 m (∠ A) = m (∠ .....)

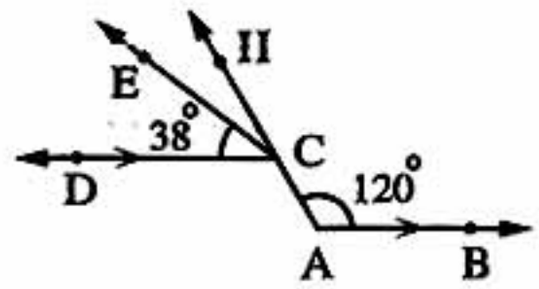
4 The perimeter of Δ DMC = ... cm.

[b] In the opposite figure :

$\overline{AB} // \overline{DC}$, m (∠ A) = 120° , $H \in \overrightarrow{AC}$

, m (∠ ECD) = 38°

Find : m (∠ ACD) , m (∠ HCE) (showing the reason)



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5 **In the opposite figure :**

$\overleftrightarrow{OR}$ is the axis of symmetry of the shape NERAM , $O \in \overleftrightarrow{MN}$

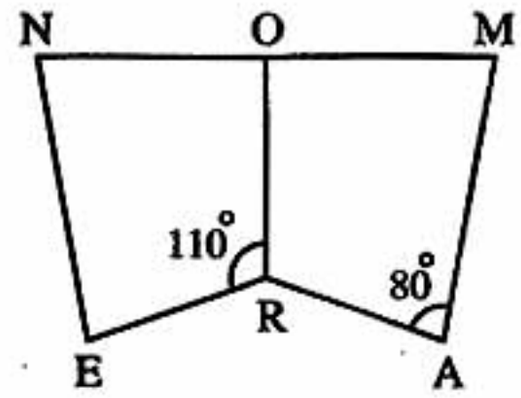
Complete : [1] Quad AMOR ≡ Quad .....

[2] m (∠ NOR) = m (∠ .....)

[3] m (∠ AMO) = m (∠ .....)

[4] m (∠ ORA) = m (∠ .....) = ...°

[5] m (∠ NER) = m (∠ .....) = ...°



7 Alexandria Governorate

Borg El-Arab Educational Zone
Al-Safwa Integrated Schools

Answer the following questions : (Calculator is allowed)

1 **Complete each of the following :**

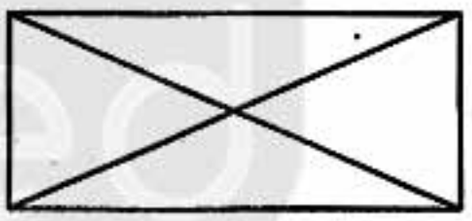
[1] The complement of the angle of measure 55° is an angle of measure .....°

[2] The sum of measures of the accumulative angles at a point equals .....°

[3] If m (∠ B) = 160° , then m (reflex ∠ B) = ...°

[4] The perpendicular bisector of a line segment is called .....

[5] The number of triangles in the opposite figure is .....



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2 **Choose the correct answer :**

[1] If $L_1 // L_2$ and $L_2 \perp L_3$, then .....

(a) $L_1 \perp L_2$ (b) $L_3 // L_2$ (c) $L_1 \perp L_3$ (d) $L_3 // L_1$

[2] If Δ ABC ≡ Δ XYZ and m (∠ A) + m (∠ B) = 110° , then m (∠ Z) = ...°

(a) 50 (b) 60 (c) 70 (d) 80

[3] If the ratio between the measures of two supplementary angles is 5 : 13 , then the measure of the smaller angle is .....°

(a) 50 (b) 130 (c) 150 (d) 180°

[4] The type of the angle of measure 89° 60̀ is .....

(a) acute. (b) obtuse. (c) right. (d) reflex.

5 The two diagonals are perpendicular and equal in length in the .....

(a) rectangle. (b) rhombus. (c) square. (d) parallelogram.

6 If $\Delta ABC \equiv \Delta LMN$, then $\overline{AC}$ ..... $\overline{LN}$

(a) = (b) ≡ (c) < (d) >

---

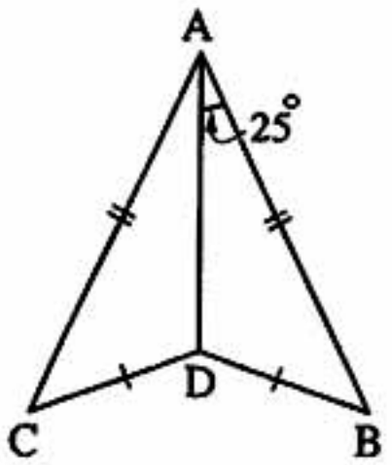
3 **[a] In the opposite figure :**

$AB = AC$, $BD = CD$

, $m(\angle BAD) = 25°$

Is $\Delta ADC \equiv \Delta ADB$? Why ?

Find : $m(\angle CAB)$



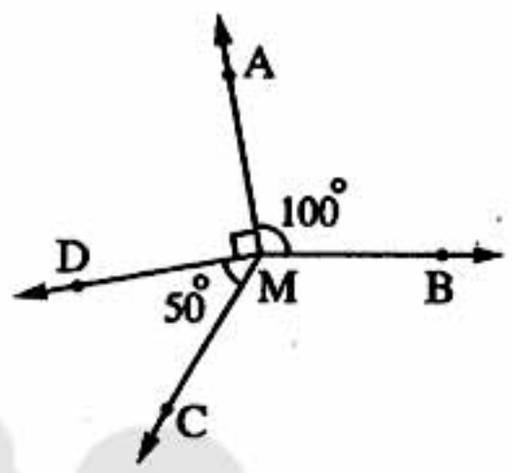
[b] In the opposite figure :

$m(\angle BMA) = 100°$

, $m(\angle AMD) = 90°$

, $m(\angle DMC) = 50°$

Find with steps : $m(\angle BMC)$



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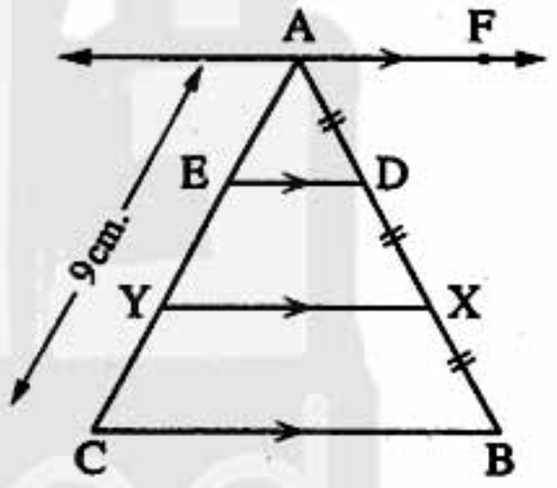
4 **[a] In the opposite figure :**

$\overleftrightarrow{AF} // \overline{ED} // \overline{YX} // \overline{CB}$

, $AD = DX = XB$, $AC = 9$ cm.

Find : The length of $\overline{AY}$ (Give reason)



[b] Draw $\angle ABC$ of measure 100° and bisect it.

---

5 **[a] In the opposite figure :**

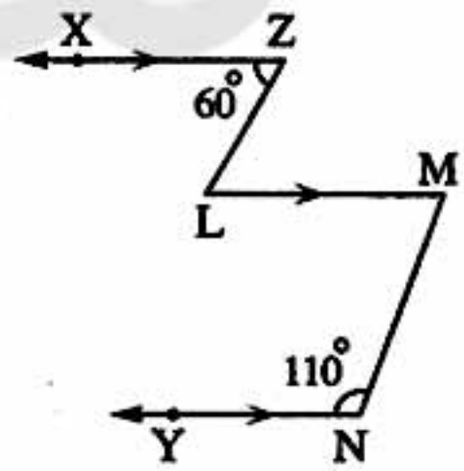
$\overrightarrow{ZX} // \overline{LM}$

, $\overline{LM} // \overrightarrow{NY}$

, $m(\angle N) = 110°$

, $m(\angle Z) = 60°$

Find : 1 $m(\angle L)$ 2 $m(\angle M)$



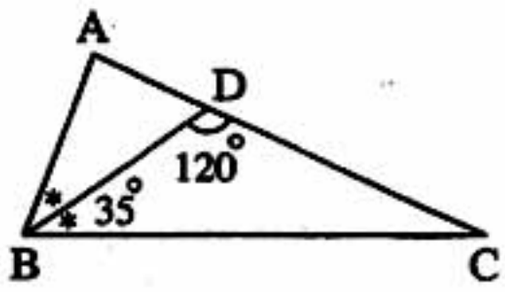
[b] In the opposite figure :

$\overrightarrow{BD}$ bisects $\angle ABC$

, $m(\angle DBC) = 35°$

, $m(\angle BDC) = 120°$

Find : $m(\angle A)$



8 El-Kalyoubia Governorate

Directorate of Education
Mathematics Supervision

Answer the following questions :

1 Choose the correct answer :

1 If $\Delta ABC \equiv \Delta XYZ$, then AC = ...

(a) XY (b) XZ (c) YZ (d) AB

2 If m ($\angle$ B) = 105° , then m (reflex $\angle$ B) = ...

(a) 255° (b) 75° (c) 105° (d) 50°

3 If $\overline{AB} \equiv \overline{CD}$ and AB = 4 cm. , then AB + 2 CD = ... cm.

(a) 10 (b) 4 (c) 8 (d) 12

4 The measure of the supplementary of the angle whose measure is 30° equals .....°

(a) 60 (b) 80 (c) 150 (d) 90

5 A cube is of volume 125 cm^3 , then the area of its base = ... cm^2

(a) 5 (b) 15 (c) 25 (d) 10

6 The measure of the right angle is .....°

(a) 60 (b) 90 (c) 180 (d) 70

2 Complete the following :

1 The two diagonals are equal in length in ..... and .....

2 The perpendicular bisector of a line segment is called .....

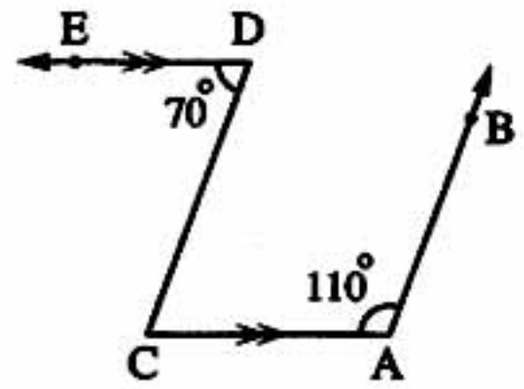
3 The sum of the measures of the accumulative angles at a point equals .....°

4 If $\Delta ABC \equiv \Delta XYZ$, m ($\angle$ A) + m ($\angle$ B) = 100° , then m ($\angle$ Z) = ...°

5 If two straight lines are perpendicular to a third , then the two straight lines are .....

3 [a] In the opposite figure :

$\overrightarrow{DE} \parallel \overline{AC}$, m ($\angle$ A) = 110° , m ($\angle$ D) = 70°



Complete the following :

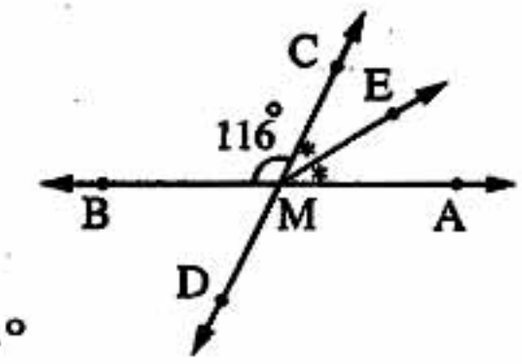
1 m ($\angle$ C) = ... because .....

2 Is $\overrightarrow{AB} \parallel \overline{CD}$? (.....) because .....

[b] Using the geometric instruments , draw $\angle$ ABC where m ($\angle$ B) = 120° , then draw $\overrightarrow{BD}$ to bisect the angle. (Don't remove the arcs)

4 **[a] In the opposite figure :**

$\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, $\overrightarrow{ME}$ bisects $\angle AMC$, $m(\angle BMC) = 116°$



Complete the following :

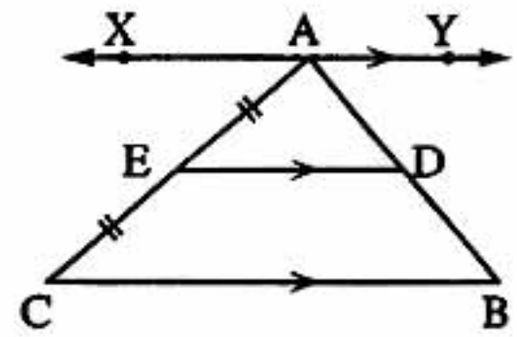
1 $m(\angle AMC) =$ ..... °

2 $m(\angle AMD) =$ ..... °

3 $m(\angle AME) =$ ..... °

[b] In the opposite figure :

$\overleftrightarrow{XY} // \overline{ED} // \overline{BC}$, $AE = EC$



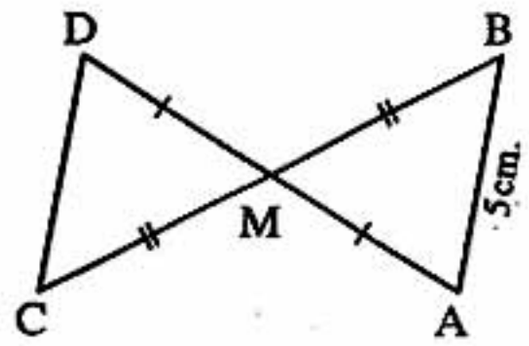
Complete the following :

1 $AD =$ .....

2 $AD : AB =$ ..... : .....

---

5 **[a] From the opposite figure complete the following :**



1 $\Delta ABM \equiv \Delta$ .....

2 $CD =$ ..... cm.

3 $m(\angle B) = m(\angle$ .....)

[b] Mention two cases of congruency of two triangles.

9 El-Sharkia Governorate

West Zagazig Zone
Zagazig English Lang. Sch. for Girls

Answer the following questions :

1 **Choose the correct answer :**

1 If $\angle X$ complements $\angle Y$ and $\angle X \equiv \angle Y$, then $m(\angle X) =$ ..... °

(a) 45 (b) 90 (c) 20 (d) 180

2 A square is of perimeter 20 cm. , then its area = ... cm^2

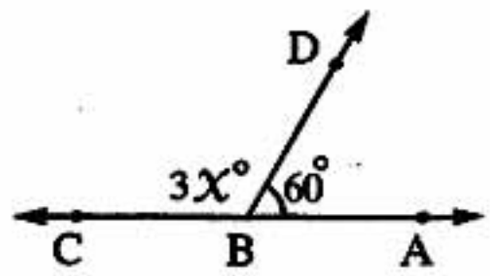
(a) 4 (b) 5 (c) 25 (d) 400

3 The two diagonals are equal in length in the .....

(a) rhombus. (b) parallelogram. (c) trapezium. (d) rectangle.

4 **In the opposite figure :**

$B \in \overleftrightarrow{AC}$, then $x =$ .....



(a) 30 (b) 120

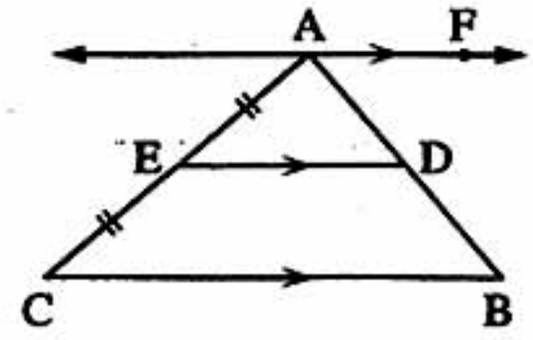
(c) 40 (d) 150

5 If $m(\angle A) = 110°$, then m (reflex $\angle A$) = ...

(a) 70° (b) 360° (c) 250° (d) 150°

6 **In the opposite figure :**

If $\overleftrightarrow{AF} // \overline{ED} // \overline{CB}$, AE = EC , then AD : AB = ...



(a) 2 : 1 (b) 3 : 2

(c) 1 : 3 (d) 1 : 2

---

2 **Complete each of the following :**

1. If $\Delta ABC \equiv \Delta XYZ$, m (∠ A) + m (∠ B) = 120° , then m (∠ Z) = ...°
2. If a straight line intersects two parallel lines , then each two corresponding angles are .....
3. If $\Delta ABC \equiv \Delta XYZ$, then AC = ...
4. Two right-angled triangles are congruent if .....
5. If two straight lines intersect , then the measures of each two vertically opposite angles are .....

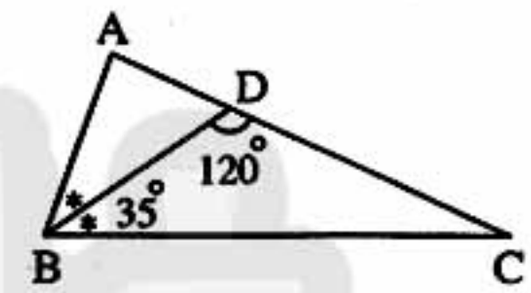
---

3 **[a] In the opposite figure :**

$\overrightarrow{BD}$ bisects ∠ ABC , m (∠ DBC) = 35°

, m (∠ BDC) = 120°

Find : m (∠ C) , m (∠ ABC) and m (∠ A)

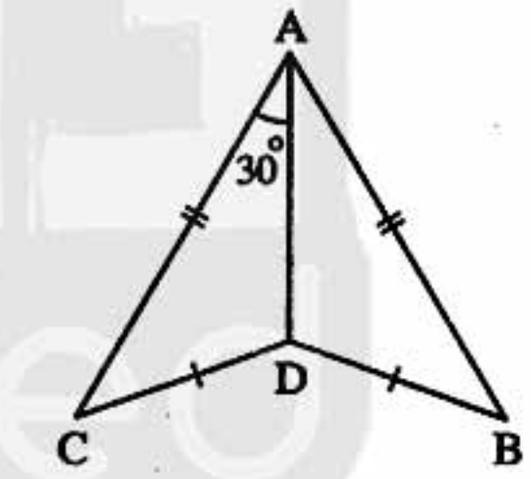


[b] In the opposite figure :

AC = AB , DC = DB

, m (∠ CAD) = 30°

1. **Prove that :** $\Delta ABD \equiv \Delta ACD$
2. **Find :** m (∠ CAB)



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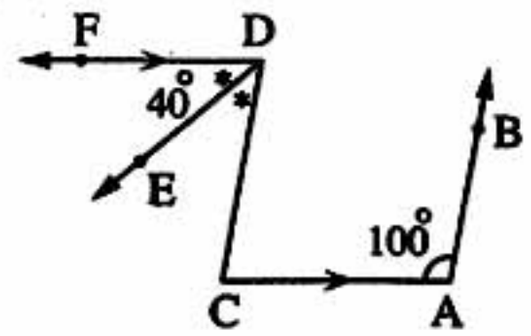
4 **[a] In the opposite figure :**

$\overrightarrow{DF} // \overline{AC}$, m (∠ A) = 100°

, $\overrightarrow{DE}$ bisects ∠ FDC , m (∠ FDE) = 40°

1. **Find :** m (∠ FDC) and m (∠ C)
2. **Prove that :** $\overline{CD} // \overrightarrow{AB}$



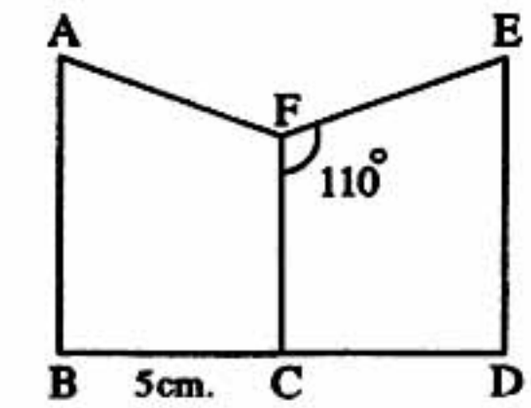
[b] In the opposite figure :

The polygon ABCF ≡ the polygon EDCF

, m (∠ EFC) = 110° , BC = 5 cm.

Find : 1 m (∠ AFC) , m (∠ AFE) and m (∠ FCB)

2 The length of $\overline{BD}$

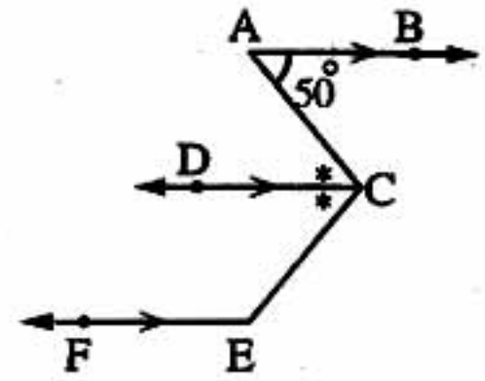


5 **[a] In the opposite figure :**

$\overrightarrow{AB} // \overrightarrow{CD} // \overrightarrow{EF}$, $\overrightarrow{CD}$ bisects $\angle ACE$

, $m(\angle A) = 50°$

Find : $m(\angle ACE)$ and $m(\angle E)$



[b] Using the ruler and compasses , draw the triangle ABC in which BC = 6 cm.

, AB = AC = 5 cm. Draw $\overline{AD} \perp \overline{BC}$ where $\overline{AD} \cap \overline{BC} = \{D\}$

(Don't remove the arcs)

10 El-Monofia Governorate

Kwesna Educational Directorate
Mathematics Supervision

Answer the following questions : ***(Calculator is permitted)***

1 **Choose the correct answer :**

1 The sum of the measures of the accumulative angles at a point equlas .....°

(a) 90 (b) 180 (c) 270 (d) 360

2 If two triangles ABC and XYZ are congruent , then .....

(a) BC = XZ (b) YX = CA (c) ZY = CB (d) AB = YZ

3 If a straight line intersects two parallel straight lines , then each two interior angles in the same side of the transversal are .....

(a) equal. (b) supplementary. (c) corresponding. (d) complementary.

4 If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) + m(\angle B) = 115°$, then $m(\angle Z)$ = ...°

(a) 115 (b) 65 (c) 15 (d) 70

5 If $m(\angle A) = 90°$, then m (reflex $\angle A$) = ...

(a) 270 (b) 180 (c) 90 (d) 360

6 If $\angle A$ supplements $\angle B$ and $\angle A \equiv \angle B$, then $m(\angle B)$ = ...°

(a) 45 (b) 90 (c) 120 (d) 60

2 **Complete each of the following :**

1 The angle whose measure is 40° complements an angle of measure .....°

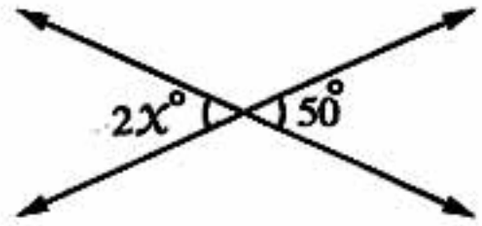
2 Two triangles are congruent if two sides and the ..... in one of them are congruent to their corresponding parts of the other.

3 If two straight lines are perpendicular to a third line , then these two straight lines are .....

4 If $L_1 // L_2$ and $L_1 \perp L_3$, then L_3 ..... L_2

5 **In the opposite figure :**

x = ...



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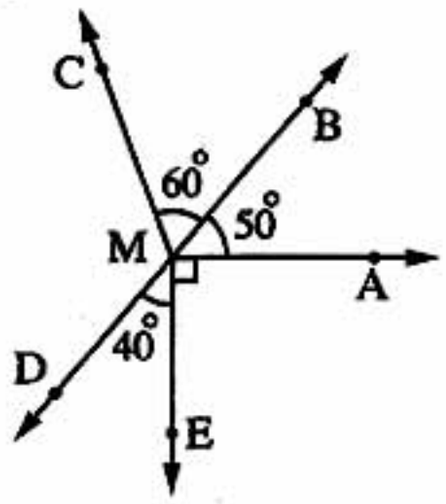
3 **[a] In the opposite figure :**

m (∠ AMB) = 50°

, m (∠ BMC) = 60°

, m (∠ DME) = 40° and $\overrightarrow{MA} \perp \overrightarrow{ME}$

Find : m (∠ DMC)



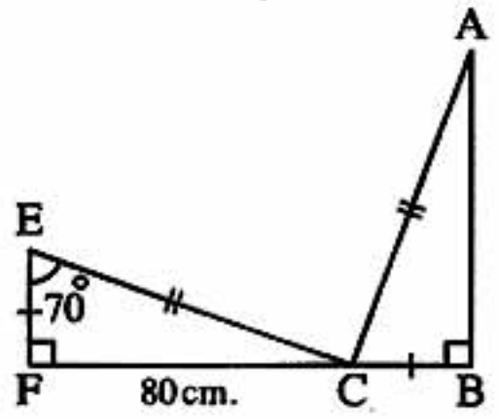
[b] In the opposite figure :

CB = FE , AC = EC

, m (∠ B) = m (∠ F) = 90°

, m (∠ E) = 70° and FC = 80 cm.

Find : m (∠ A) and the length of $\overline{AB}$



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4 **[a]** Draw the angle ABC where m (∠ B) = 130° , using the ruler and the compasses bisect ∠ B

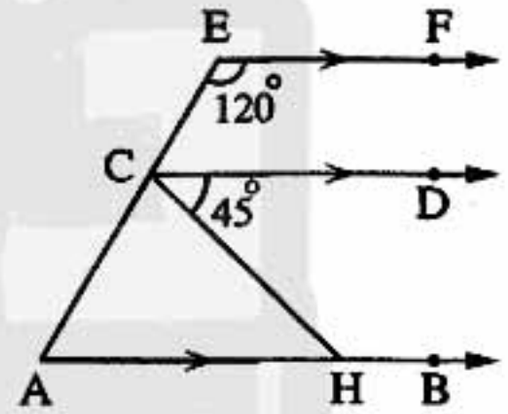
[b] In the opposite figure :

$\overrightarrow{EF} // \overrightarrow{CD} // \overrightarrow{AB}$

, m (∠ CEF) = 120°

, m (∠ HCD) = 45°

Find : The measures of the angles of Δ AHC



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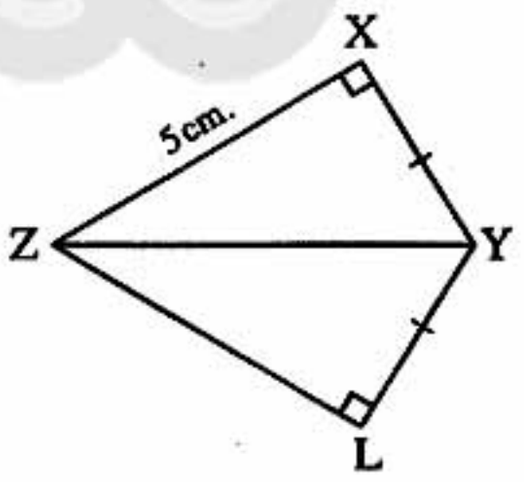
5 **[a] In the opposite figure :**

m (∠ ZXY) = m (∠ ZLY) = 90°

, XY = LY and ZX = 5 cm.

1 Is Δ YXZ ≡ Δ YLZ ? Why ?

2 **Find :** The length of $\overline{ZL}$



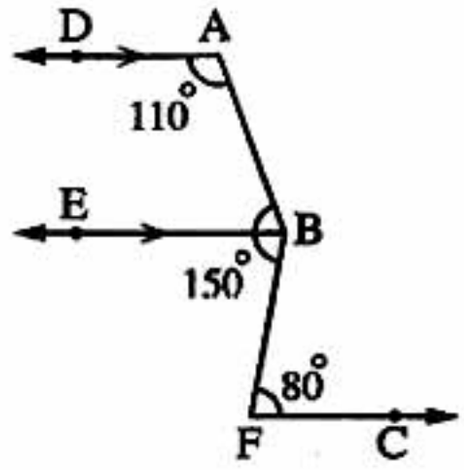
[b] In the opposite figure :

$\overrightarrow{AD} // \overrightarrow{BE}$

, m (∠ F) = 80°

, m (∠ A) = 110° and m (∠ ABF) = 150°

Is $\overrightarrow{BE} // \overrightarrow{FC}$? (Give reason)



11 El-Dakahlia Governorate

Talkha Educational Directorate
A.M.D.L School

Answer the following questions :

1 Choose the correct answer :

1 The sum of measures of the accumulative angles at a point is .....

(a) 180° (b) 90° (c) 360° (d) 60°

2 The acute angle supplements ..... angle.

(a) an acute (b) an obtuse (c) a right (d) a reflex

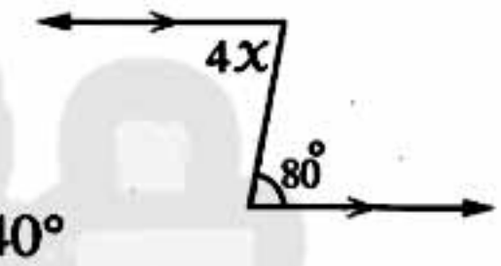
3 The two straight lines parallel to a third straight line are .....

(a) intersecting. (b) congruent. (c) parallel. (d) perpendicular.

4 If $\Delta ABC \equiv \Delta DEF$, $m(\angle A) + m(\angle B) = 110°$, then $m(\angle F) =$ .....

(a) 180° (b) 110° (c) 80° (d) 70°

5 **In the opposite figure :**



$x =$ .....

(a) 80° (b) 100° (c) 20° (d) 40°

6 $\overrightarrow{AB} \cup \overrightarrow{AC} =$ .....

(a) $\overrightarrow{AB}$ (b) $\angle ABC$ (c) $\angle BAC$ (d) $\varnothing$

2 Complete the following :

1 The complement of an angle of measure 75° is an angle of measure .....

2 If $m(\angle A) = 160°$, then m (reflex $\angle A$) = ...°

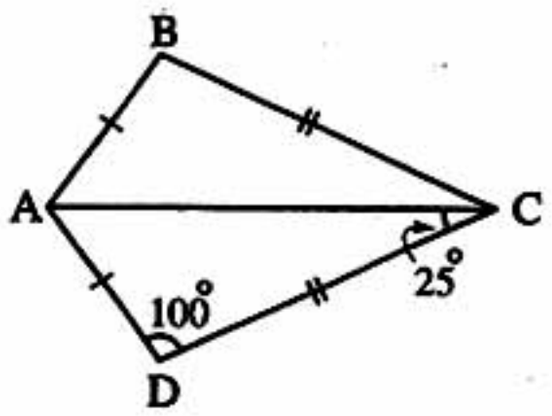
3 If two straight lines intersect , then the measures of each two vertically opposite angles are .....

4 If $\overline{AB} \equiv \overline{XY}$, then AB – XY = ...

5 If $\angle A$ supplements $\angle B$ and $\angle A \equiv \angle B$, then $m(\angle B) =$ .....°

3 [a] State any two cases of congruency of two triangles.

[b] From the opposite figure :



1 **Prove that :** $\Delta ABC \equiv \Delta ADC$

2 **Find :** $m(\angle BAC)$

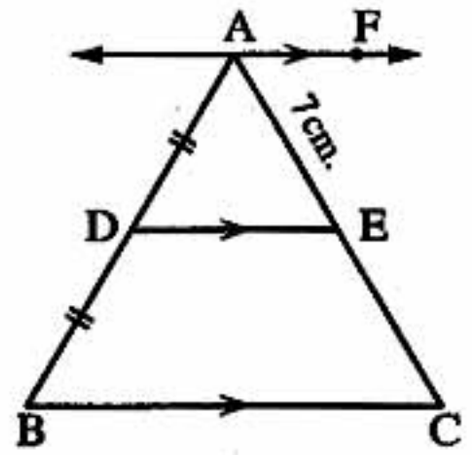
4 **[a] In the opposite figure :**

$\overleftrightarrow{AF} // \overline{DE} // \overline{BC}$

, D is the midpoint of $\overline{AB}$

, AE = 7 cm.

Find : AC



[b] Using the geometric instruments , draw Δ ABC in which BC = 6 cm. , AB = AC = 5 cm.

, then draw $\overline{AD} \perp \overline{BC}$ where $\overline{AD} \cap \overline{BC} = \{D\}$, **Find by measuring :** AD

(Don't remove the arcs)

---

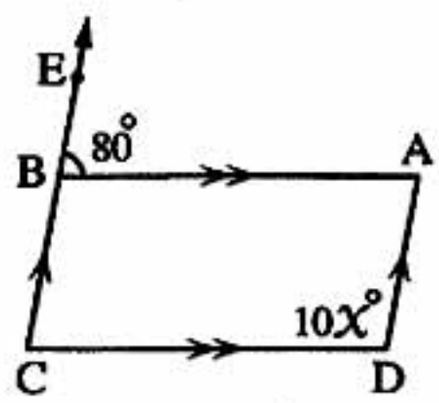
5 **[a] In the opposite figure :**

$\overleftrightarrow{AB} // \overleftrightarrow{DC}$, $\overleftrightarrow{BC} // \overleftrightarrow{AD}$

, $E \in \overleftrightarrow{BC}$, m (∠ D) = 10 x°

, m (∠ ABE) = 80°

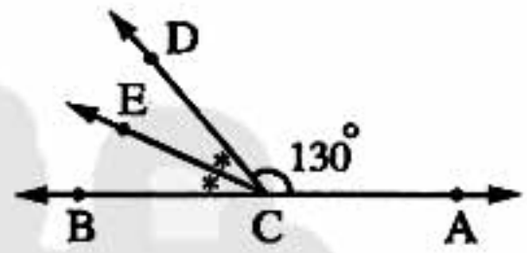
Find : The value of x



[b] In the opposite figure :

$C \in \overleftrightarrow{AB}$, m (∠ ACD) = 130° , $\overrightarrow{CE}$ bisects ∠ BCD

Find : m (∠ DCE)



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12 Ismailia Governorate

Directorate of Education
Math's Supervision

Answer the following questions :

1 **Choose the correct answer :**

1 The angle of measure 60° supplements an angle of measure .....°

(a) 40 (b) 30 (c) 120 (d) 90

2 If two straight lines are perpendicular to a third , then the two straight lines are .....

(a) perpendicular. (b) intersecting. (c) parallel. (d) congruent.

3 If Δ ABC ≡ Δ XYZ , m (∠ A) + m (∠ B) = 140° , then m (∠ Z) = ...°

(a) 60 (b) 40 (c) 80 (d) 140

4 The number of axes of symmetry of the square equals .....

(a) 1 (b) 2 (c) 3 (d) 4

5 If a straight line cuts two parallel lines , then each two corresponding angles are .....

(a) equal in measure. (b) complementary.

(c) supplementary. (d) right.

6 If m (∠ A) = 100° , then m (reflex ∠ A) = ...°

(a) 80 (b) 260 (c) 50 (d) 100

2 Complete the following :

1 If two adjacent angles are complementary , then their outer sides are .....

2 If Δ ABC ≡ Δ XYZ , then AC = ...

3 If ∠ C ≡ ∠ D , m (∠ C) = 90° , then m (∠ D) = ...°

4 The measure of the straight angle equals .....°

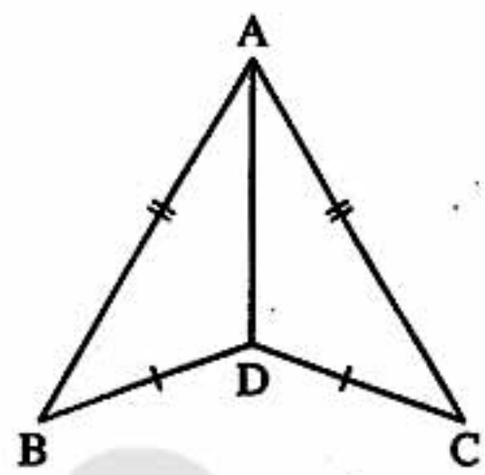
5 The perimeter of a square is 40 cm. , then its side length is ..... cm.

3 [a] In the opposite figure :

AC = AB

, DC = DB

Is Δ ADB ≡ Δ ADC ? Why ?



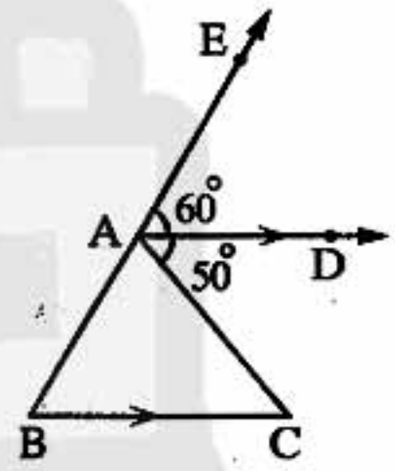
[b] In the opposite figure :

$\overrightarrow{AD}$ // $\overline{BC}$

, m (∠ EAD) = 60°

, m (∠ CAD) = 50°

Find : 1 m (∠ C) 2 m (∠ B) 3 m (∠ BAC)



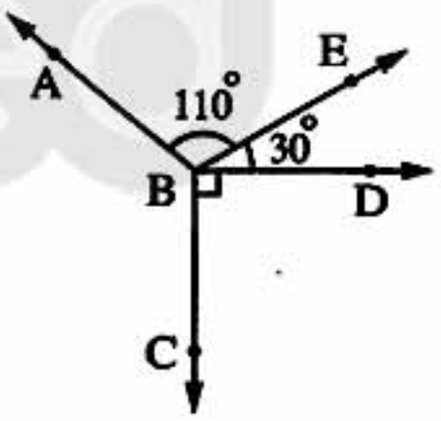
4 [a] In the opposite figure :

m (∠ DBE) = 30°

, ∠ CBD is a right angle

, m (∠ EBA) = 110°

Find : m (∠ ABC)



[b] Draw $\overline{AB}$ of length 6 cm. and bisect it. (Don't remove the arcs)

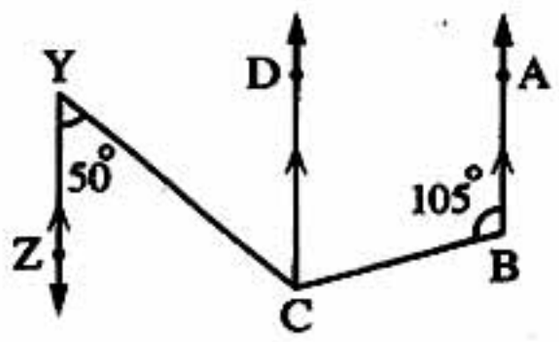
5 [a] In the opposite figure :

$\overrightarrow{BA}$ // $\overrightarrow{CD}$ // $\overrightarrow{YZ}$

, m (∠ ABC) = 105°

, m (∠ ZYC) = 50°

Find : 1 m (∠ YCD) 2 m (∠ BCD) 3 m (∠ BCY)



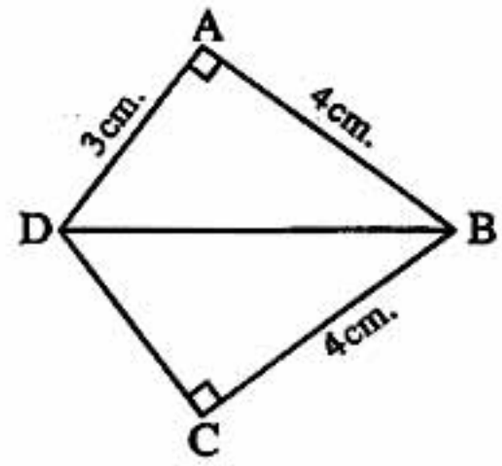
[b] In the opposite figure :

$AB = BC = 4$ cm. , $AD = 3$ cm.

, $m(\angle A) = m(\angle C) = 90°$

1 Is $\Delta ABD \equiv \Delta CBD$? Why ?

2 **Find :** The length of $\overline{CD}$



13 Damietta Governorate

Damietta Inspection of Mathematics
Official Language Schools

Answer the following questions :

1 Choose the correct answer :

1 If $\angle X$ supplements $\angle Y$ and $\angle X \equiv \angle Y$, then $m(\angle X) =$ .....°

(a) 45 (b) 90 (c) 180 (d) 360

2 If $\Delta ABC \equiv \Delta XYZ$, then .....

(a) $AB = YZ$ (b) $BC = XZ$ (c) $YX = CA$ (d) $ZY = CB$

3 The centimeter cube is a unit for measuring the .....

(a) perimeter. (b) area. (c) volume. (d) length.

4 Two straight lines are perpendicular to a third line , then the two straight lines are .....

(a) perpendicular. (b) parallel. (c) congruent. (d) intersecting.

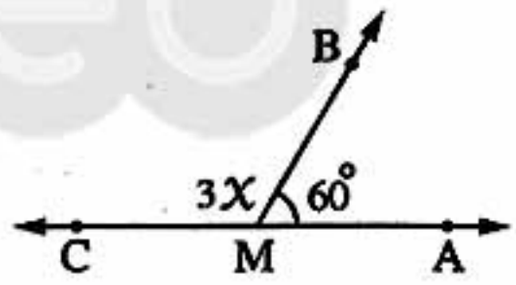
5 $\overline{XY}$ ..... $\overleftrightarrow{XY}$

(a) $\notin$ (b) $\in$ (c) $\subset$ (d) $\not\subset$

6 **In the opposite figure :**

If $\overleftrightarrow{AC} \cap \overrightarrow{MB} = \{M\}$

, then the value of x = ...°



(a) 20 (b) 30 (c) 40 (d) 60

2 Complete each of the following :

1 If $m(\angle A) = 120°$, then m (reflex $\angle A$) = ...°

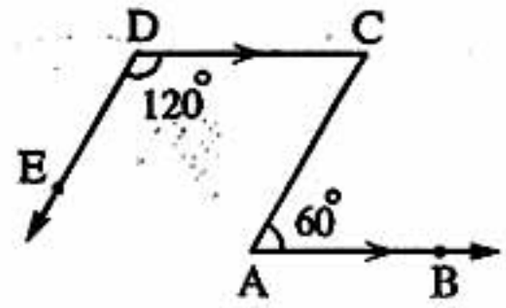
2 If the perimeter of a square is 20 cm. , then its area equals ..... cm^2

3 The number of edges of the cuboid is .....

4 If a straight line cuts two parallel straight lines , then each two alternate angles are .....

5 If $\overline{AB} \equiv \overline{CD}$, then $AB - CD$ = ...

3 **[a] In the opposite figure :**



$\overrightarrow{AB} // \overline{DC}$

, m (∠ A) = 60°

, m (∠ D) = 120°

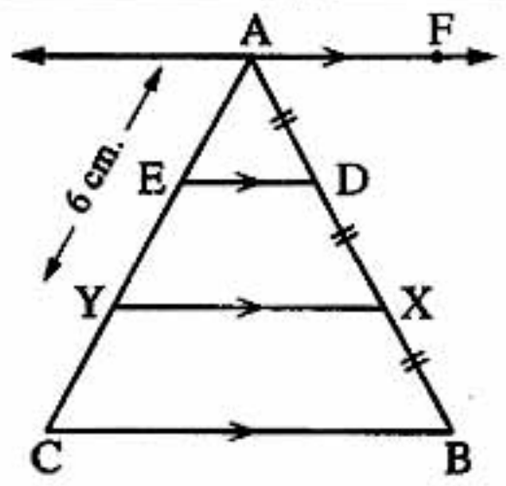
1 **Find :** m (∠ C) 2 Is $\overline{AC} // \overrightarrow{DE}$? Why ? (Write the steps)

[b] Draw ∠ ABC where m (∠ B) = 115° Using the ruler and compasses bisect ∠ B by $\overrightarrow{BD}$

(Don't remove the arcs)

---

4 **[a] In the opposite figure :**



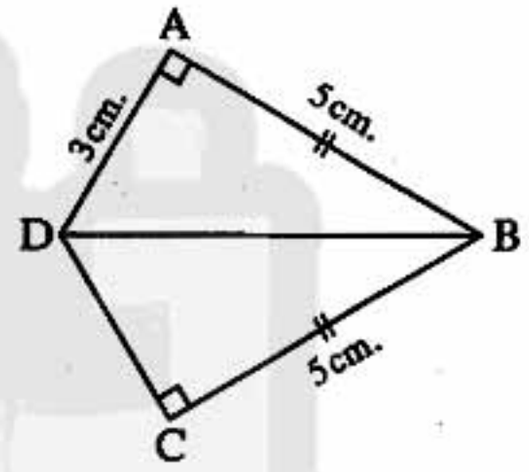
$\overleftrightarrow{AF} // \overline{DE} // \overline{XY} // \overline{BC}$

, AD = DX = XB

, AY = 6 cm.

Find : The length of $\overline{AC}$ (Give the reason)

[b] In the opposite figure :



m (∠ BAD) = m (∠ BCD) = 90°

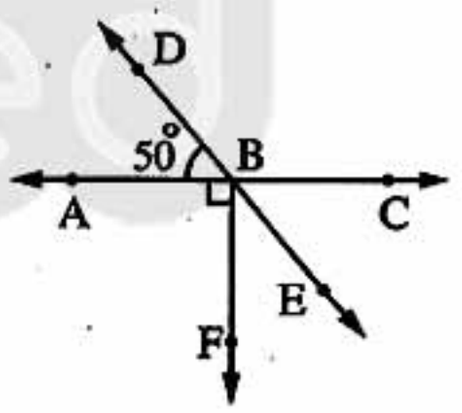
, AB = CB = 5 cm. , AD = 3 cm.

Mention the conditions for Δ ABD , Δ CBD to be congruent

, **then find :** The length of $\overline{CD}$

---

5 **[a] In the opposite figure :**



$\overleftrightarrow{AC} \cap \overleftrightarrow{DE} = \{B\}$

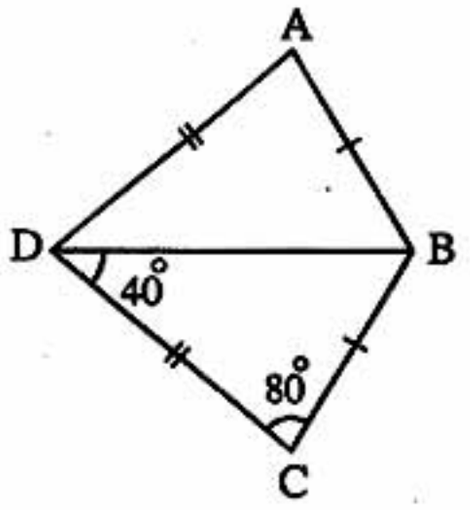
, m (∠ ABD) = 50°

, m (∠ ABF) = 90°

Find showing the steps :

1 m (∠ DBC) 2 m (∠ CBE) 3 m (∠ FBE)

[b] In the opposite figure :



AB = BC , AD = CD

, m (∠ C) = 80°

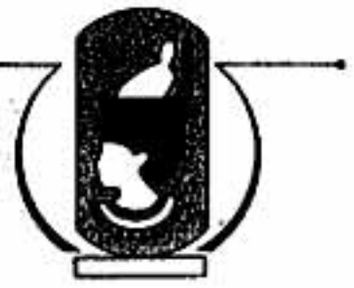
, m (∠ BDC) = 40°

Is Δ CBD ≡ Δ ABD ? Why ?

and find : m (∠ ABD)

14 Souhag Governorate

Maths Supervision



Answer the following questions :

1 Choose the correct answer :

1 If ∠ X ≡ ∠ Y and ∠ X , ∠ Y are supplementary angles , then m (∠ X) = ...

(a) 45° (b) 90° (c) 135° (d) 180°

2 If two straight lines are perpendicular to a third line , then the two straight lines are .....

(a) perpendicular. (b) parallel. (c) congruent. (d) intersecting.

3 If Δ XYZ ≡ Δ ABC and m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ...

(a) 50° (b) 80° (c) 100° (d) 360°

4 The angle whose measure is more than 90° and less than 180° is .....

(a) obtuse. (b) acute. (c) right. (d) straight.

5 If m (∠ X) = 2 m (∠ Y) , ∠ X and ∠ Y are two complementary angles , then m (∠ Y) = ...

(a) 90° (b) 45° (c) 30° (d) 15°

6 The sum of the measures of the accumulative angles at a point is .....

(a) 45° (b) 90° (c) 180° (d) 360°

---

2 Complete each of the following :

1 If two straight lines intersects , then each two vertically opposite angles are .....

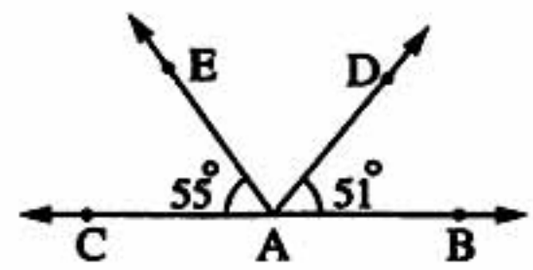
2 If Δ ABC ≡ Δ XYZ , then XZ = ...

3 If ∠ A supplements ∠ B , m (∠ A) = 100° , then m (reflex ∠ B) = ...°

4 **In the opposite figure :**

$A \in \overleftrightarrow{CB}$

, then m (∠ DAE) = ...°

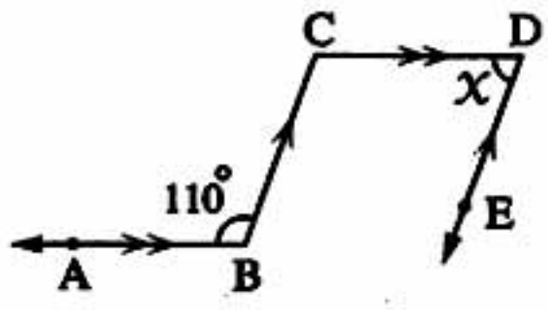


5 **In the opposite figure :**

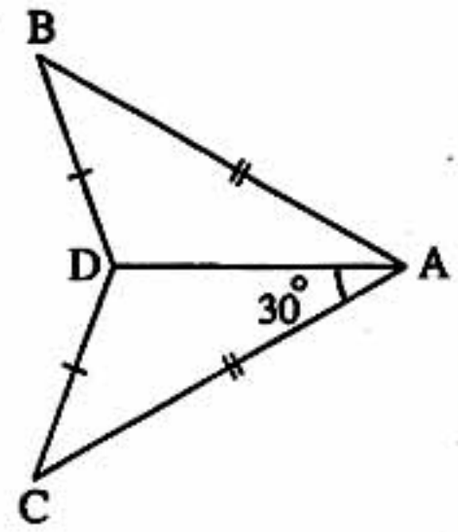
$\overline{CD} \parallel \overrightarrow{BA}$

, $\overrightarrow{DE} \parallel \overline{CB}$

, then x = ...°



3 **[a] In the opposite figure :**



$AB = AC$

, $BD = DC$

, $m(\angle CAD) = 30°$

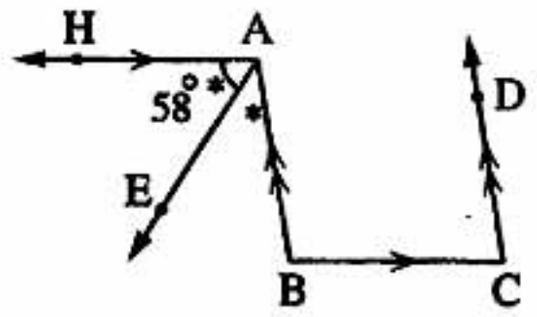
1 **Prove that :** $\Delta ABD \equiv \Delta ACD$

2 **Find :** $m(\angle CAB)$

[b] Using the ruler and the compasses , draw the angle ABC where $m(\angle ABC) = 110°$ and draw $\overrightarrow{BD}$ to bisect the angle. (Don't remove the arcs)

---

4 **[a] In the opposite figure :**

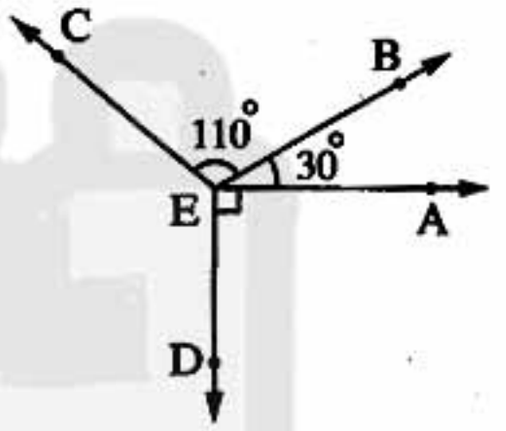


$\overrightarrow{CD} // \overrightarrow{BA}$, $\overrightarrow{CB} // \overrightarrow{AH}$

, $\overrightarrow{AE}$ bisects $\angle BAH$, $m(\angle EAH) = 58°$

Find : $m(\angle C)$

[b] In the opposite figure :



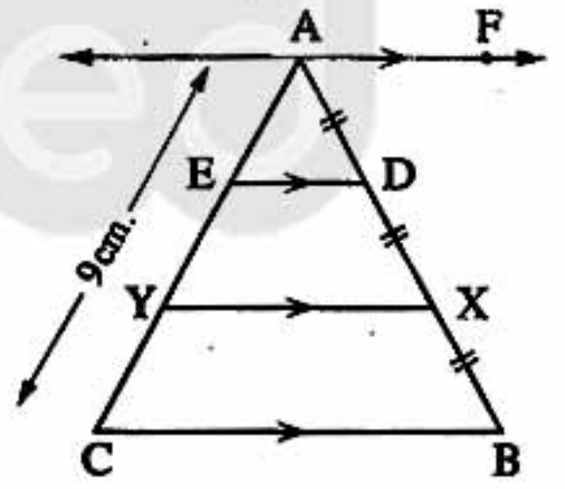
$m(\angle AEB) = 30°$, $m(\angle BEC) = 110°$

, $m(\angle AED) = 90°$

Find : $m(\angle DEC)$

---

5 **[a] In the opposite figure :**



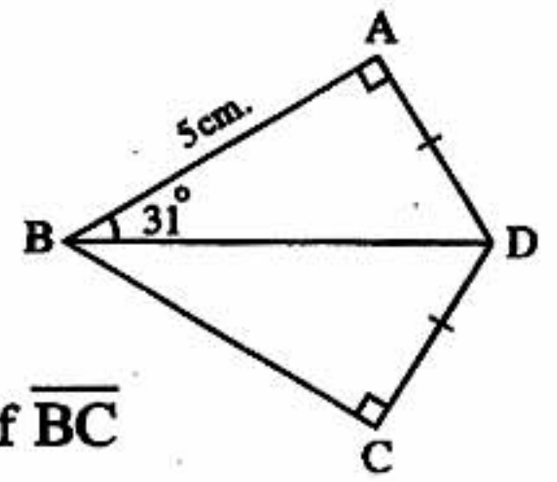
$\overleftrightarrow{AF} // \overline{ED} // \overline{YX} // \overline{CB}$

, $AD = DX = XB$

, $AC = 9$ cm.

Find : The length of $\overline{AY}$

[b] In the opposite figure :



$m(\angle A) = m(\angle C) = 90°$, $m(\angle ABD) = 31°$

, $AB = 5$ cm.

, $AD = CD$

1 **Prove that :** $\Delta ABD \equiv \Delta CBD$

2 **Find :** The length of $\overline{BC}$

3 **Find :** $m(\angle CBD)$

15 Luxor Governorate

Luxor Directorate
El-Salam Language School

Answer the following questions :

1 Choose the correct answer :

1 A square is of side length 7 cm. , then its perimeter = ... cm.

(a) 14 (b) 21 (c) 24 (d) 28

2 The circumference of the circle = ...

(a) 2π (b) $2\pi r$ (c) πr (d) πr^2

3 The sum of measures of the accumulative angles at a point equals .....°

(a) 360 (b) 180 (c) 603 (d) 150

4 If $L_1 // L_3$, $L_2 // L_3$, then .....

(a) $L_1 // L_2$ (b) $L_1 \perp L_2$ (c) $L_2 \perp L_3$ (d) $L_1 \perp L_3$

5 The measure of the supplement of the angle whose measure is 30° equals .....°

(a) 60 (b) 180 (c) 150 (d) 90

6 If $\angle X$ complements $\angle Y$ and $\angle X \equiv \angle Y$, then m ($\angle X$) = ...°

(a) 45 (b) 90 (c) 180 (d) 360

2 Complete :

1 Two triangles are congruent if two sides and ..... of one triangle are congruent to their corresponding parts of the other triangle.

2 If m ($\angle A$) = 105° , then m (reflex $\angle A$) = ...°

3 If $\Delta ABC \equiv \Delta XYZ$, then $\overline{AC} \equiv$ .....

4 If a straight line intersects two parallel lines , then each two corresponding angles are .....

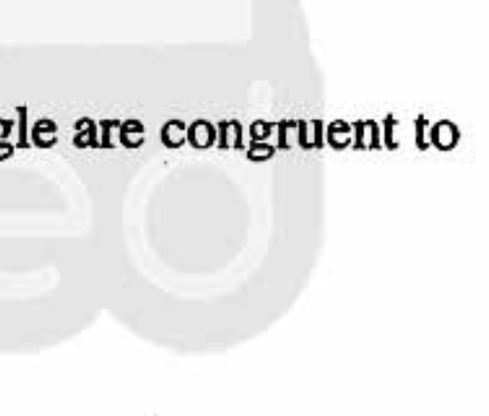
5 In ΔABC , if m ($\angle A$) = 50° , m ($\angle B$) = 40° , then m ($\angle C$) = ...°

3 [a] In the opposite figure :

m ($\angle AMB$) = 110° , m ($\angle AMD$) = 90°

, m ($\angle DMC$) = 40°

Find : m ($\angle BMC$) (With steps)



[b] Using the geometric tools , draw ∠ ABC whose measure is 90°
, then draw $\overrightarrow{BF}$ to bisect the angle. (Don't remove the arcs)

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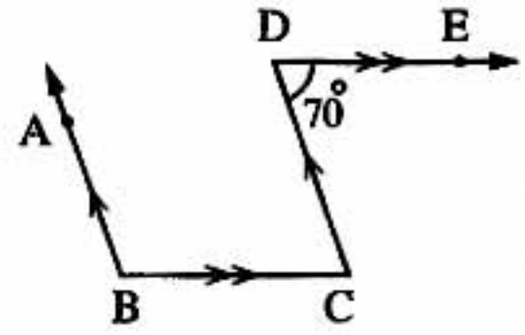
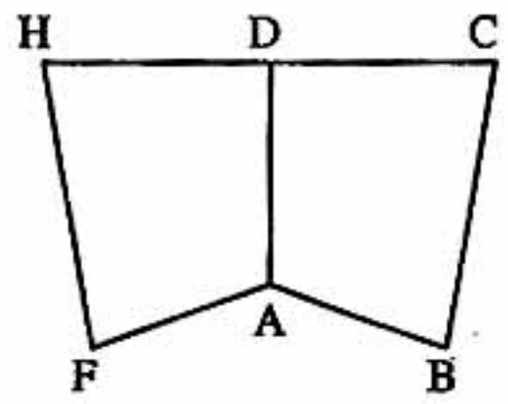
4 **[a] In the opposite figure :**



$\overrightarrow{DE}$ // $\overline{BC}$
, $\overline{DC}$ // $\overrightarrow{BA}$
, m (∠ D) = 70°
Find : m (∠ C) , m (∠ B) (Give reason)

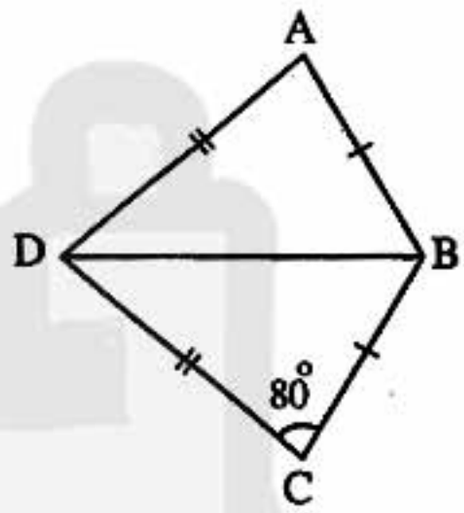
[b] In the opposite figure :



The polygon ABCD ≡ the polygon AFHD
Complete :
1 AB = ...
2 BC = ...
3 m (∠ C) = m (∠ .....)
4 m (∠ F) = m (∠ .....)

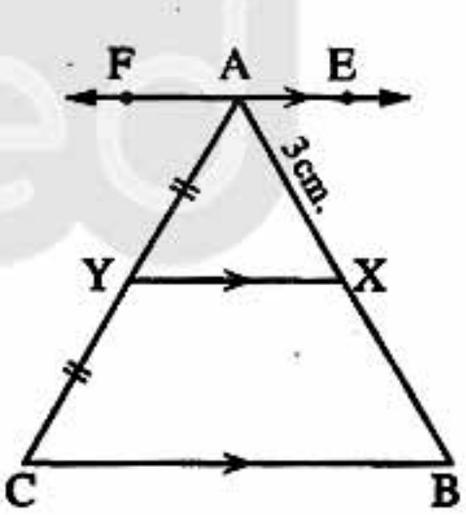
---

5 **[a] In the opposite figure :**



AB = BC
, AD = DC
, m (∠ C) = 80°
1 **Prove that :** Δ ABD ≡ Δ CBD
2 **Find :** m (∠ A)

[b] In the opposite figure :



$\overleftrightarrow{AF}$ // $\overline{XY}$ // $\overline{BC}$
, AY = YC
, AX = 3 cm.
Find : The length of $\overline{AB}$ (Give reason)